

Embryology as a Paradigm for Boethius' *musica humana*

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Abstract

At the beginning of Boethius' *De institutione musica*, *musica humana* is defined as a *coaptatio*, a well ordered relationship between body and soul and between the parts of the body and the parts of the soul. Boethius promised to expand the topic later, but he never returned to it. As a consequence Medieval and Renaissance music theorists gave it different interpretations. This paper is part of a wider project which aims at recovering the historical meaning of *musica humana* and its natural implications for human life, by identifying Boethius' sources on the relationship between music and the human body. Analyzing some of the Pythagorean, Hippocratic and Neoplatonic treatises on embryology, numerology and music as well as their reception in the Latin culture, this paper will explore the definition of *musica humana* as a style of thought which connected music and science using the same interpretative models, metaphors and images, well-known at Boethius' time.

Keywords

body and soul – embryology – numerology – Greek and Latin music theory – Late Antiquity

* This paper couldn't have been written without Andrew Barker and, in particular, his *Pythagoreans and medical writers on periods of human gestation*, which I could read in drafts. He also introduced me to Parker 1999. I'm delighted to have this occasion to thank Andrew Barker for his past and present support to my researches.

At the beginning of his *De institutione musica* (*Fundamentals of music*),¹ Boethius introduced *musica humana* as a *coaptatio*, a well ordered relationship between human body and human soul and between the parts of the body and the parts of the soul.² He promised to expand the topic later, but he never returned to it. As a consequence, from the medieval musical treatises onwards *musica humana* has been subjected to a variety of interpretations. This is true especially of the theory whereby the humours of the body and the pulse follow a musical harmony.³

Many questions arise about *musica humana*: where does the locution come from? Where does the concept come from? Was it present in available sources for Boethius? What does *musica humana* mean for Boethius? This paper will try to answer these questions and open the way to the writing of a new history of *musica humana*.

It is well-known that the phrase *musica mundana* existed before Boethius—in Macrobius's *Commentarii in Somnium Scipionis* (*Commentary to the Dream of Scipio*)⁴ II 4, 13—but an accurate research in the Latin music lexicon shows that *musica humana* did not. Boethius was used to neologisms and to shift towards new definitions for common words. Boethius first gave the *quadrivium*⁵ its name, which will become commonly used everywhere during the Middle Ages and the Modern Era. Furthermore he redefined the spectrum of meanings of *persona*⁶ in the theological debate against Nestorius. *Musica humana* was one of these lucky expressions, but with a very different destiny.

So far researchers focused on the relationship between music and the soul and identified the following sources for Boethius' *musica humana*: Plato,

1 The Boethius editions used in the present paper are: the Teubner edition by G. Friedlein in 1867 (hereafter quoted as: "*De institutione musica*") and the English translation by C. Bower in Palisca edition: Boethius 1989. The French translation by C. Meyer: Boèce 2004 was consulted, too.

2 *De institutione musica* 1, 2, pp. 188, 26-30; 189, 1-5 Friedlein.

3 Amri-Kilani 2002.

4 The Macrobius editions used in the present paper are: *Ambrosii Theodosii Macrobiani Commentarii in Somnium Scipionis*, second edition by J. Willis (hereafter quoted as: "Macr.") and the translation by W.H. Stahl: Macrobius. 1952, 1990 ("Stahl"). Furthermore the following texts were considered: the Italian translation by L. Scarpa: Macrobii 1981 and the Les Belles Lettres edition by M. Armisen-Marchetti: Macrobe 2003.

5 *Institutio arithmetica* 1, 1: "Inter omnes priscae auctoritatis uiros qui Pythagora duce puriore mentis ratione uiguerunt, constare manifestum est haud quemquam in philosophiae disciplinis ad cumulum perfectionis euadere, nisi cui talis prudentiae nobilitas quodam quasi quadruiu uestigatur." About the history of the word *quadrivium*: Díaz y Díaz 1999: 71-72.

6 *Contra Euthychen et Nestorium*, 3, 1-23. See Bradshaw 2009: 199-122.

Phaedo 86, *Laws* 653b and *Republic* 442-443; Aristotle, *Nicomachean Ethics*, I 13, 1102 a, 26-28; Id., *Protrepticus* fr. 6; Cicero, *Tusculanae disputationes* 1,10; ps.-Plutarch, *de musica* 1140b and Ptolemy, *Harmonics* 3, 5-7 (95-100)⁷ plus a particular emphasis on the concept of *dynamis harmonike* in Ptolemy, *Harmonics* 3, 92, 1-8 and *passim*, deeply analysed by Cecilia Pantì.⁸

To these we may add the *Aristotle's Greek Commentaries* which considered aspects of the relationship between music, soul and body,⁹ and some of the major works about the *quaestio de anima*, one of the most debated topics by Neoplatonists and Christians from the 3rd to the 5th century. Boethius could have in mind *De civitate Dei*, *De Trinitate* and various sermons by Augustine¹⁰ as well as *De statu animae* (ca. 470) by Claudianus Mamertus.¹¹ In these texts the relationship between body and soul is often described using musical terms, or with reference to music and to the language of ancient Greek music treatises.¹² But the concept of *musica humana* as a whole does not derive from any of these texts.

If we consider *musica humana* from the point of view of the relationship between music and the human body, however, things change dramatically—and many different sources, widely neglected so far, can be considered in the research. Things change if *musica humana* is considered as a “style of thought” in which music and science were connected and shared the same interpretative models, metaphors and images. As Fantini said, a “style of thought” « concerns a series of common elements that are often not defined with precision and are sometimes inconsistent, but that are shared in a given culture, producing a series of common elements, which form a sort of territory allowing communication and < objective > evaluation, with reciprocal and constant exchanges between the different domains of knowledge ».¹³ In the Late Antiquity, music and science shared metaphors about the human body in the context of works concerning the being-to-life of the human body, i.e. Macrobius' *Commentarii in Somnium Scipionis*, Censorinus' *De die natali* (*The Birthday Book*), Proclus' *Commentarius in Platonis Timaeum* (*Commentary to Plato's "Timaeus"*), as well as some Hippocratic treatises circulating in Latin translations, copied in Rome,

7 Bowen 1989, p. 10 note 39; Meyer 2004, 5.

8 Pantì, 2017.

9 Restani 1999.

10 Restani-Mauro 2011.

11 Restani 2007.

12 Restani 2008.

13 Fantini 2013, 257.

Ravenna and other cultural centres.¹⁴ So far these texts have almost never been related to Boethius' *musica humana*, but Boethius most likely knew them and it was with them in mind, I think, that he defined *musica humana*. This paper will explore this hypothesis.

My case-study focuses on Macrobius' *Commentarii in Somnium Scipionis* as one of the texts in Boethius' mental and material library.¹⁵ Macrobius' work was one of the few non medical texts containing a section about embryology available in Late Roman Antiquity. Macrobius, a popularizer of Neoplatonic thought and texts,¹⁶ included embryology in the context of the number theory, which had been transmitted for ten centuries (6th BC-5th AD) through the treatises of Pythagorean tradition. The starting point for Macrobius was number 56, the age when Scipio Aemilianus would die (cum aetas tua quinquagesimum et sextus annum compleverit, quae summa tibi fatalis erit, I 6, 83). Number 56 is 7 by 8, and seven and eight are « the two numbers which, when multiplied with each other, determine the life span of the courageous Scipio » (I 6, 1).¹⁷ It is also the perfect duration of a hero's life, being the product of an even (female) number, eight, and an odd (male) number, seven (I 6, 2-3):

Hence Timaeus, in Plato's dialogue by the same name, says that God who made the World-Soul intertwined odd and even in its make-up: that is, using the numbers two and three as basis, he alternated the odd and even numbers from two to eight and from three to twenty-seven. [...] Accordingly we are given to understand that these two numbers, I mean seven and eight, which combine to make up the life-span of a consummate statesman, have alone been judged suitable for producing the World-Soul, for there can be no higher perfection than the Creator. [...] and besides we learned a moment ago that numbers preceded the World-Soul, being interwoven in it, according to the majestic account in the *Timaeus*, which understood and expounded Nature herself.¹⁸

14 Restani 1997; Id. 2004.

15 For the documentary evidence, which includes the quotation of *musica mundana* and the subscription to the *Commentary's* first book, see the bibliography quoted in Restani-Mauro 2011.

16 Cristiani 2007, 39.

17 « Ac primum hoc transire sine admiratione non possumus quod duo numeri qui, in se multiplicati, vitale spatium viri fortis includerent, ex pari et impari constiterunt: hoc enim vere perfectum est quod ex horum numerorum permixtione generatur ».

18 Stahl, 99.

First of all Macrobius explains (I, 5)—in a way meant to be understandable by most people, including his son Eustatius—that seven is the perfect number, the number that can symbolically describe¹⁹ everything: « That is why Cicero, in another passage in Scipio's Dream, says concerning the number seven, *It is, one might almost say, the key to the universe (qui numerus omnium fere nodus est, I 6, 34-35)* ».²⁰ Number seven represents the cosmos in all its parts—especially Timaeus' *anima mundi*—and the human being, soul and body.

Then Macrobius describes the relationship between the parts of number seven—number three and number four—and the human soul and its parts (I 6, 41-44), and the relationship between number seven and the phases through which the being-to-life of the human body and its parts occurs (I 6, 62-80). According to Plato (*Republic* IV 439b ss.) the soul was made of three parts: « the first being reason, *logistikon*, the second emotion, *thymikon*, and the third appetite, *epithymetikon* » (I 6, 42),²¹ according to the three consonant intervals: dia tesson i.e. the fourth, dia pente i.e. the fifth and dia pason i.e. the octave, which arises from the concord of the fourth and the fifth. This view was accepted by most later philosophers, states Macrobius (and we understand he meant: except Aristotle):

item nullus sapientum animam ex symphoniis quoque musicis constituisse dubitavit. inter has non parvae potentiae est quae dicitur διὰ πασσών haec constat ex duabus id est διὰ τεσσάρων et διὰ πέντε, fit autem διὰ πέντε ex hemiolio et fit διὰ τεσσάρων ex epitrito, et est primus hemiolius tria et primus epitritus quattuor. quod quale sit suo loco planius exsequemur. (I 6, 43)

Moreover, all wise men admit that the soul was also derived from musical concords. Among these an important one is the diapason, which consists of two others, the fourth and the fifth. The interval of the fifth is based on the ratio of three to two and the interval of the fourth on the ratio of four to three; in one the first term is three and in the other four; this we shall discuss more fully in its proper place. (Stahl, 108)

From I 6, 45 Macrobius' commentary follows the similar section in the second book on *Arithmetica* by Nicomachus of Gerasa reported by *Theologumena*

19 Parker 1999, 521 note 25 defines this text: « a repository of much of this numerical mysticism ».

20 Stahl, 106.

21 Stahl, 108.

arithmetica 57-71 (Pseudo-Iamblichus, *The Theology of Arithmetic*, or: *Theological Aspects of Arithmetic*), a Neoplatonist work dating from the fourth century, which was transmitted in the corpus of Iamblichus treatises.²² Macrobius' text is a kind of Latin adaptation, if not a translation, of Nicomachus' section about the relationship between the being-to-life of the body and number seven: seven « is the number by which man is conceived, developed in the womb, is born, lives and is sustained, and passing through all the stages of life attains old age; his whole life is regulated by it (numerus qui hominem concipi, formari, edi, vivere, ali ac per omnes aetatum gradus tradi senectae atque omnino constare facit) » (I 6, 62; Stahl, 112). Here Macrobius refers to the fact

that the nature has ordained that the uterus without seed be purged according to this number, as if by way of exacting a tribute every month from women not bearing a burden, this point must not be overlooked, that the sperm which within seven hours after emission has not escaped is pronounced effective (I 6, 62, Stahl, 112).

In this respect a comparison between Macrobius' I 6, 62-67 and *Theologumena arithmetica* 61-62 is quite interesting for our purposes. The first common source is a passage from *De natura puerum* by Hippocrates (*Nat. Puer.* 7, 490, 3-11 Littré), whom Macrobius quoted both in the *Commentarii* (I 6, 17, 64; I 14, 19) and in *Saturnalia* (1, 20, 5; *Prog.* 2, 110, 3-4).²³ Pseudo-Iamblichus reported that Nicomachus quoted Hippocrates' story about an artist, *mousourgòs*, « une baladine fort estimée » for Littré, « a dancing girl » for the English translator, « una cantante » for the Italian translator of *Theologumena*. She did not want to give up her clients and asked her mistress for some advice. The mistress asked Hippocrates, who told her that the artist must jump repeatedly up and down touching her uterus with her knees. Seven jumps lead to the desired result: made by the sack containing the seed is expelled with a noticeable sound (*kai psòfos egeneto*).

22 About *Theologumena arithmetica*'s authorship there are different opinions, from the attribution to Iamblichus in the manuscript tradition, to a text included in the corpus of mathematical writings and conventionally referred to as pseudo-Iamblichus (the modern editor, De Falco 1922, and the Italian translator, Romano 1995), or to anonymous (O'Meara 1992, 15 note 24).

23 Anastassion 2012, XXVI.

Pseudo-Iamblichus, *The Theology of Arithmetic*, 61-62 (Waterfield, 91-92)

Macrobius, *Commentary*, I 6, 64 (Stahl, 112-113)

For seven days the embryo resembles a membranaceous, waterbearing kind of thing, as the physician Hippocrates agrees, when he says in *On the Nature of the Child*:

A female relative of mine had a particularly excellent and valuable dancing-girl, who was going with a man, but did not want to get pregnant and be less highly prized by her admirers. The dancing-girl heard the sorts of things women say to one another, that when a woman is about to become pregnant the seed stays inside her and does not come out. She took in what she heard, and at one point she noticed that not all the seed came out of her. She told her mistress, and word reached me. When I heard the news—it was only the seventh day—I instructed her to jump up high and to the ground. When she had done so seven times, the seed came out of her, accompanied by a noise. I will describe what the discharge was like; it was as if the surrounding shell of an egg had been stripped off, and within the internal membrane the moist part showed through.

Although this was surmised by natural scientist, Hippocrates himself, who cannot deceive nor be deceived, definitely proved it by experiment, and testifies in his book *On the Nature of the Child* that the sperm expelled from the womb of a woman he had attended on the seventh day after conception had such a sack about it. For this woman, who begged him to end her pregnancy, he prescribed vigorous jumping. He says on the seventh day the seventh leap sufficed for expelling the seed with a sack such as we have described above.

After that Nicomachus and Macrobius abandon the medical description and move on to two other medical *auctoritates*—Strato the Peripatetic, i.e. Strato from Lampsacus (d. 270/268 a.C.) and Diocles of Carystus²⁴ (IV a.C.)—who

24 Cf. Diocles of Carystus 2001, fr. 45b, van der Eijk (ed.), 100.

« assign the stages in the development of the embryo to seven-day periods » (Macr. I 6, 65, Stahl, 113; Nicomachus, in *Theologumena* 62). They describe the weekly changes of the fetus in the uterus during the nine months (Macr. I 6, 65-67; Nicomachus in *Theologumena* 62):

on the second hebdomad drops of blood appear on the surface of the aforementioned sack; on the third hebdomad they work their way into the humor within; on the fourth hebdomad this humor coagulates so that there is a curdling intermediate between flesh and blood, as it were, both liquid and solid; and occasionally, indeed, on the fifth hebdomad a human shape is being molded in the substance of the humor, no larger than a bee in fact, but in such a manner that on that small scale all the limbs and the distinct contour of the whole body stand out. We added the word *occasionally* because it is an established fact that when the limbs are delineated in the fifth hebdomad the child is born in the seventh month. When the child is to be born in the ninth month, however, the limbs distinctly appear in the sixth hebdomad in the case of a girl, and in the seventh in that of a boy (Macr. I 6, 65-66, Stahl, 113).²⁵

As usual, Macrobius' Latin version is less detailed and less clear. Most important, his description does not include the arithmetical demonstration (attributed to the Pythagoreans) which Nicomachus (*Theologumena*, 63)—and possibly by his sources—deemed crucial to an understanding of the causes of the baby's survival potential:

That the most important cause of generation is the hebdomad is shown by the fact that through it 7-month children are no less viable than 9-month children; but the 8-month children placed in between them are destroyed by natural necessity. The Pythagoreans addressed these facts through the following sort of calculation, approaching them through arithmetical ratios and diagrams. [...] By putting together the fundamental cubes of the two smallest numbers, 2 and 3, which are 8 and 27, they make 35, in which one can very clearly see the ratios of the concords through which *harmonia* is perfected. For all coming-to-be (*genesis*) arises from opposites, wet and dry, cold and hot, and opposites do not agree of come together to compose anything without *harmonia*. And the

25 Stahl, 113 and note 67. The same topic is also discussed in: *De septimanis*, 1913. Roscher (ed.), 92-97; Theon Smyrnaeus, 104.

best of *harmoniai*, which contains all the concordant ratios, is that correlated with the number 35, which not only fills out solidity and completion for the two cubes just mentioned, which are equals multiplied by equals multiplied by equals, but is also the sum of the first three perfect numbers, those equal to [the sum of] their own parts, in potentiality 1, and in actuality 6 and 28. (*Theol. Ar.* 63, 7-18, transl. Barker, *Pythagoreans*, 1-2.)

Nicomachus then explains that: « 35 is also the summation of all the relationships of the concords which display in a basic way harmonic theory—6, 8, 9, 12 . . . ». As we mentioned before, this arithmetical demonstration is not contained in Macrobius' text: either he left it out, or he used other sources.

Then both treatises emphasize the importance of the seventh hour after childbirth for viability; the growing of the limbs after the first seven months; the number of the members of the body (I 6, 77²⁶):

The number seven also marks the members of the body (*Idem numerus totius corporis membra disponit*). There are seven within, which the Greeks call the dark members: the tongue, the heart, the lungs, the liver, the spleen, and two kidneys. There other seven others, each with its own veins or ducts, whose function it is to receive and expel food and air: the pharynx, the esophagus, the stomach, the bladder, and the three principal intestines (Stahl, 116).

The seven dark members are almost the same as in Pseudo-Iamblichus (67),²⁷ where they are listed as follows: pharynx, esophagus, stomach, duodenum, ileum, bladder, rectum (68).²⁸ Seven hours without air or seven days without food cause death: Pseudo-Iamblichus (68) and Macrobius (I 6, 78) agree on this. Having applied number seven to the tissues from the interior to the surface of the body, Macrobius I 6, 80 (and Pseudo-Iamblichus, 68) applies it to the visible parts, too: « the head, the trunk, two arms, two legs and the generative organs »; then to the arm and the leg joints; to the openings (*foramen*) through which the senses operate: « the mouth, two eyes, two nostrils, and two ears ».

26 Macr. I 6, 77: « septem sunt enim intra hominem quae a Graecis nigra membra vocitantur: lingua, cor, pulmo, iecur, lien, renes duo; et septem alia cum veni sec meati bus quae adiacent singulis ad cibum et spiritum accipiendum reddendumque sunt deputata: guttur, stomachus, alvus, vescica et intestina principalia tria. »

27 Stahl, 116 note 87.

28 Stahl, 116 note 90.

Macrobius' conclusion is: « Hence it is only right that this number, the regulator and master of the whole fabric of the human body (*totius fabricae dispensator et dominus*), should also indicate whether a patient will recover or not » (I 6, 81). Finally, the body can move in seven directions (I 6, 81):²⁹ « forward, backward, to the left or right, upward or downward, and rotating » (Stahl, 117).

Many ancient philosophers and Plato's commentators as well as Pythagoreans agree on number seven being the number to be used to describe human anatomy and to determine the critical days of disease, i.e. Theo Smyrnaeus' *Expositio rerum mathematicarum ad legendum Platonem utilium*, Philo Judaeus' *De opificio mundi*, Anatolius, Clemens Alexandrinus, Chalcidius, Martianus Capella.³⁰ There is no evidence that Boethius read or knew any of them. However we have many clues of the fact that Boethius most likely had access to the first book of Macrobius' *Commentarii* and read it and used it.

It has already been established that a dozen medieval copies of Macrobius' first book bear subscriptions indicating a close connection with Boethius' milieu.³¹

The Latin translation and paraphrase of Nicomachus' *Second Book on Arithmetic*, as it is transmitted by *Theologumena Arithmetica*, was translated and paraphrased by Macrobius (I 6, 45-82).

The only quotation of a Greek music treatise having survived into the Middle Ages,³² i.e. Ptolemy' *On Harmony*, is in Macrobius (I 19, 20).

The music treatises by Nicomachus and Ptolemy are two main sources of Boethius' *De musica*: we don't know in which kind of redaction he could read both of them.

Boethius used the expression *musica mundana* (Macrobius II 4, 13), albeit with a different meaning.

We can thus conclude that the elements that helped Boethius make up the kind of music which he defined as *humana* could definitely be found in Macrobius' *Commentarii in Somnium Scipionis*.

My demonstration could stop here. But to better understand how deep and wide was the knowledge about the coming-to-be of the fetus and its relationship with the musical consonance numbers, it's useful to quote a number of texts which also circulated at the time of Boethius.

29 « Totius fabricae dispensator et dominus » recalls Vitruvius' *De arch.* I 7: « In fabricam corporis humani », see: Restani, 2007, 251-252.

30 Stahl, 116-117 notes 92-94.

31 See behind note 14.

32 Gallo 1989: 9.

Among them, Varro in Censorinus' *De die natali*, a Latin non medical treatise, dating back to 238 AD, transmitted the Pythagorean tradition on the coming-to-be of the fetus. Here too the medical theory and the number's theory form the basis of musical knowledge.³³

Pythagoras said something more believable [than Diogenes and Hippon], that there are two types of pregnancy, one of seven months, the other of ten, and the first corresponds to one set of numbers, the latter to a different set. These numbers, which cause change in each foetus, determining when semen changes into blood, blood into flesh, and flesh into human form, when compared to each other have the ratios called 'voices', which in music are known as 'harmonies'. (Varro ap. Censorinus, *de die natali*, 9, 3³⁴)

First, as I mentioned before in general terms, he said that there are only two types of pregnancy, one shorter called the seven-month, which comes forth from the womb on the two hundred and tenth day after conception; the other is longer, the ten-month, and it is born on the two hundred and seventieth day. Both of these, the shorter and the longer, are based on the number six. [3] For what is conceived from the seed is for the first six days, he said, a milky humour, then bloody for the next eight; when these eight days are compared to the first six, they form the first harmony, known as the 'fourth' [3:4]. In the third stage nine days are added, now making flesh; these compared to the first six make the ratio 2/3: in terms of harmonies, the 'fifth'. Then finally, after a following twelve days, it becomes a fully formed body; the comparison of these with the same six makes the harmony called the 'octave', in the ratio 1/2. [4] These four numbers-six, eight, nine, twelve, when added produce thirty-five. And so not undeservedly six is the basis of conception. The Greeks call it *teleion* (we say 'perfect'), since it has three parts: a sixth, a third, and a half, that is, one, two, and three, making the very same thing [i.e. $1/6 + 1/3 (2/6) + 1/2 (3/6) = 1; 1 + 2 + 3 = 6$]. [5] But just as the beginning of the seed and that milky basis of conception is set free at the start by this number, so also this the beginning for the

33 Varro ap. Censorinus, *de die natali*, 9, 3: «Pythagoras autem, quod erat credibilis, dixit partus esse genera duo, alterum septem mensum, alterum decem, sed priorem aliis dierum numeris conformari, aliis posteriorem. Eos vero numeros, qui in uno quoque partu aliquid adferunt mutationis, dum aut semen in sanguinem aut sanguis in carnem aut caro in hominis figuram convertitur, inter se conlatos rationem habere eam, quam voces habent, quae in musice σύμφωνοι vocantur.»

34 Censorinus 2007; Parker 1999, 520.

fully-formed human being and as it were the other basis for growth, that is, thirty-five days, when multiplied by six, when it comes to the two hundred and tenth day, brings forth the fully-grown child. [6] The other pregnancy, the longer, is contained by the larger number, i.e. seven, which completes all of human life, as Solon writes and the Jews follow in numbering all their days, and the ritual books of the Etruscans seem to indicate. Hippocrates and the other doctors point to nothing else in the bodies of the sick, for they consider each seventh day to be a 'crisis' [a critical day]. [7] So just as the origin of the other pregnancy is in six days, after which the seed turns into blood, so the origins of this one lies in seven. And as there the infant became articulated in thirty-five days, so here following the ratios in about forty days . . . [8] So these forty days multiplied by the initial seven gives two hundred and eighty days, that is, forty weeks; but since the child is actually born on the first day of the last week, six days are subtracted and the result is two hundred and seventy-four days. . . . [10] The experience of the doctors has frequently observed these things, for they have observed many women who have not retained the seed which was received, and know for a fact that what is ejected within six or seven days is milky, and they called it *ekrusis* [efflux, flowing out] and what is ejected later is bloody and called *ektrosmos* [miscarriage]. (Censorinus, *de die natali*, 11, 2-10; Parker 1999, p. 521)

Censorinus' text transmission³⁵ is documented by 15 complete codes: the oldest is ms. Dombibliothek 166, Köln, from the 7th-8th c. We don't know for a fact that Boethius was familiar with *De die natali*, but we have no proof of the contrary.³⁶

In Proclus' (410 or 412-485), *Commentarius in Platonis Rem publicam* (*Commentary on the Republic*), arithmetic knowledge referring to the coming-to-be of the fetus is closely linked to the music theory, in line with the well-established idea in Athens school that learning mathematics was the first necessary step to be able to understand philosophy. Numbers and relevant applications in music theory here explain how seven-month babies or nine-month babies are viable, and eight-month babies are not.

35 Rapisarda 1989, 6-8.

36 Jeserich 2013, 156, writes: "Censorinus's work *De die natali*, written around 238, and the *Fragmentum Censorini* that were bound together with it briefly aroused interest, presumably initially on the basis of a fourth-century uncial codex, and then disappeared from the debate."

And that is to be expected. For the primary number of 7-month births, 35, is in the numbers 6, 8, 9, 12, whose extremes contain the double ratio and the octave; and the primary number of 9-month births is in the concordant numbers 6, 9, 12, 18, whose extremes contain the triple ratio. Between them there is no other concordant ratio, so that it is to be expected that since there is no concord, 8-month births are unfruitful. Further, when the numbers from 2 to 8 are added together they make 35, and those from 1 to 9 make 45 (the appropriate origin for 8 is 2, since it is its cube, and for 9 it is 1, since the ennead is a new 'one'), and there is no mean between them. Hence there is no number that makes 8-month births, whether it is considered arithmetically or <geometrically?>. For when 35 is multiplied by 6 it makes the 7-month period and when 45 is multiplied by 6 it makes the 9-month period, but when 40 is multiplied by 6 it makes the 8-month period [*lacuna*] turning back to the original numbers, 7, 9 and 8. Of these the first is made up of the numbers around the right angle of the triangle that will be specified, which are 4 and 3, female and male; the second is made up of the largest numbers, 4 and 5, female and male; and the third is made up of the largest and the smallest, which are 5 and 3, which are both males, and it is therefore to be expected that it is unfruitful. And 6, which is marriage, will be seen in the area [that is, the area of the triangle]. Hence it is to be expected that when it joins male with female it is fruitful, but when it joins males with one another it is unfruitful. (Procl. in R. 2,34, 28-35, 22 Kroll, Barker (transl.) in: *Pythagoreans and medical writers on periods of human gestation*)

The preceding arguments are based on numbers. But the *anatōmikoi* also mention the distinctions found in these numbers. They say that when the sperm has frothed (ἀφρωθῆναι) for a period of 6 days, during the next 8 days it is transformed into blood, during the next 9 it becomes flesh-like, and during the remaining 12 days it acquires form; and when it has been progressively organized in this way it is born at 7 months. And in the other cases [i.e. those leading to birth at 9 months], similarly, it receives the same form in periods of 6, 9, 12 and 18 days. Thus the number 6 is their common origin, since it is this that makes each of them. (Procl. in R. 35, 22-36, 2 Kroll; Barker (transl.) in: *Pythagoreans and medical writers on periods of human gestation*)

A direct relationship between individual texts by Proclus and by Boethius was identified in the late 19th century. The cultural environment Boethius had in mind was that of the Neoplatonic philosophical schools in Athens and

Alexandria.³⁷ Proclus' complex arithmetic knowledge can apply to philosophy but also to the subtle distinctions by *anatomikoi* in medical theory.

Augustine (354-430) bitterly criticized anatomists among all physicians, because he deemed it impossible to find the numbers behind the harmony of body parts through the dissection of dead bodies, which is ideally the opposite of gestation. Augustine's interest in medicine, apparent in his letters and sermons,³⁸ goes side by side with a deep knowledge of numerology, as shown in *De ordine* and *De musica*. The word *coaptatio*, Latin for *harmonia*, was coined by Augustine and it can be found, before Boethius, only in Augustine's works.³⁹ In the last book of *De civitate Dei* (*The City of God*), when discussing the eternal happiness of the saints, the resurrection of the body, and the miracles of the early Church, Augustine focused on harmony in the human body, which anatomists vainly look for (XXII 24, 4):

Assuredly no part of the body has been created for the sake of utility which does not also contribute something to its beauty. And this would be all the more apparent, if we knew more precisely how all its parts are connected and adapted (*coaptata*) to one another, and were not limited in our observations to what appears on the surface; for as to what is covered up and hidden from our view, the intricate web of veins and nerves, the vital parts of all that lies under the skin, no one can discover it. For although, with a cruel zeal for science, some medical men, who are called anatomists (*anatomicos*), have dissected the bodies of the dead, and sometimes even of sick persons who died under their knives, and have inhumanly pried into the secrets of the human body to learn the nature of the disease and its exact seat, and how it might be cured, yet those relations (*numeros*) of which I speak, and which form the concord (*coaptatio*), or, as the Greeks call it, 'harmony', of the whole body outside and in, as of some instrument, no one has been able to discover, because no one has been audacious enough to seek for them. But if these could be known, then even the inward parts, which seem to have no beauty, would so delight us with their exquisite fitness, as to afford a profounder satisfaction to the mind—and the eyes are but its ministers—than the obvious beauty which gratifies the eye. (Engl. transl. by Christian Classic Ethereal Library)

37 Obertello 1974, I, 521.

38 Keenan 1936, 168-190.

39 Restani-Mauro 2011, 170-177.

In the prooimion of *De institutione musica* (1, 2, 188, 26-30; 189, 1-5 Friedlein), Boethius states that *musica humana* is a *coaptatio* three times. The first occurrence is a quotation from Plato's *Timaeus*:⁴⁰

What Plato rightfully said can likewise be understood: the soul of universe was joined together according to musical concord [*musica convenientia*]. For when we hear what is properly and harmoniously united in sound conjunction with that which is harmoniously coupled and joined together within us and are attracted to it, then we recognize that we ourselves are put together in its likeness (Bower transl., 13).

The context of the second and third occurrences of the word *coaptatio* is the definition of *musica humana* as a medium between *musica mundana* and *musica ab instrumentis constituta*. *Musica humana* represents in the human body an arithmetic proportion (*analogia*) similar to that of the cosmos and, like *musica mundana*, cannot be commonly heard by living people. Music that can be heard, compatible with human hearing and senses, acoustically represents the same order in the cosmos and the human being.

In an effort to prove that Plato and Aristotle essentially agreed, Boethius refers to the two parts of the soul—which, according to Aristotle, is composed of the rational and the irrational (*Nicomachean Ethics*, I 13, 1102 a, 26-28; *Protrepticus* fr. 6)—being united by music numbers, an idea which the Pythagoreans and Platonists agreed with and Aristotle rejected (*On Soul*, I 4, 407b27-408a30).

Humanam vero musicam quisquis in sese ipsum descendit intellegit. Quid est enim quod illam incorpoream rationis vivacitatem corpori miscet, nisi quaedam *coaptatio* et veluti gravium leviumque vocum quasi unam consonantiam efficiens temperatio? Quid est aliud quod ipsius inter se partes animae coniungat, quae, ut Aristoteli placet, ex rationabili inrationabilique coniuncta est? Quid vero, quod corporis elementa permiscet, aut partes sibimet rata *coaptatione* contineat? Sed de hac posterius dicam. (*Inst. mus.* I, 2, 188.26-189.1, my italics)

40 « Hinc etiam internosci potest, quod non frustra a Platone dictum sit, mundi animam musica convenientia fuisse coniunctam. Cum enim eo, quod in nobis est iunctum convenienterque **coaptatum**, illud excipimus, quod in senis apte convenienterque coniunctum est, eoque delectamur, nos quoque ipsos eadem similitudine **compactos** esse cognoscimus », Boethius, *De institutione musica*, I, 1, 180.

Whoever penetrates into his own self perceives human music. For what unites the incorporeal nature of reason with the body if not a certain harmony (*coaptatio*) and, as it were, a careful tuning of low and high pitches as though producing one consonance? What other than this unites the parts of the soul, which, according to Aristotle, is composed of the rational and the irrational? What is it that intermingles the elements of the body or holds together the parts of the body in an established order (*coaptatione*)? I shall speak of these things later. (Bower, 10)

The same verb recurs in the second book⁴¹ in the explanation why the three means, i.e. geometric, arithmetic and harmonic, are named as they are:

Armonica <medietas> autem uocatur, quoniam est ita *coaptata*, ut in differentiis ac terminis aequalitas proportionum consideretur.

The “harmonic” is so named, because it is fitted (*coaptata*) together in such a way that equality of ratios is observed between differences and between extreme terms.

Boethius’ use of the word *coaptatio* hints a background of interconnected traditions: Pythagorean, Platonic and Neoplatonic numerology and Hippocratic and Peripatetic embryology, namely medical perspectives on the coming-to-be of the fetus according to consonance numbers.

Alongside the texts above, other medical and pseudo-medical treatises circulated in Boethius’ times, such as treatises collected in the so called Galenian or Hippocratic corpus: e.g. *Pros Gauron peri tou pos empsukoutai ta embrua* (*To Gaurus On How Embryos are Ensouled*), *De septimanis* and *Peri diaites* (*On Regimen*).

The treatise *Pros Gauron*, or conventionally Latin *Ad Gaurum* (*To Gaurus On How Embryos are Ensouled*),⁴² was attributed to Galen, probably because it circulated in medical schools in Antiquity: in 1895 Karl Kalbfleisch first edited it and attributed it to Porphyry. Scholars largely agree with this hypothesis.⁴³ The treatise presents musical metaphors and similes both in the arguments aimed at showing that the embryo is not actually an animal, and in the arguments aimed at showing that the embryo is not potentially an animal. In the first argument, a musical metaphor concerns the relationship between soul and

41 *Inst. mus.* II, 14, 243,20-22; Bower, 67: I owe Panti 2017 this quotation and above all the lecture of the drafts of her enlightening article which I hope to discuss in a future book.

42 Porphyry 2011. I thank my husband, Letterio Mauro, who brought this text to my attention.

43 Wilberding, *Introduction*, 7-10; Chiossone, 2015, 7-8.

body when the individual self-moving soul enters or exits the body (11,2,5-10; 14-16; 11,3, 1-5). The self-moving soul arrives at birth, not forcibly but because of the suitability with that particular body. It is with one body only that the soul can be in harmony. This suitability is managed by the World-Soul.

For the ensoulment is natural, and kindling in general [proceeds] according to the harmony of the [things] joined together with respect to their capacity for being joined into one. [...] And neither willing nor aiming nor choosing contribute anything to its presence, since if the harmony is dissolved not one of these keep the soul from departing. [...] And so just as [in death] when the instrumental body comes to be ill-fitted—even someone employed thousands upon thousands [of devices] to block up the mouth and nostrils and all the body's other cavities, even if someone should *choose* to have the soul remain or *force* or *beg* it to remain, it goes away by the necessity of nature which ordained that two ill-fitted things in no way form a harmony. (Wilberding transl., 45-46)

The following simile resorts to acoustics to explain how the sympathy between body and soul (11,4, Wilberding transl., 46):

And just as strings that have been tuned to the same scale, though they be separated by a great distance, if wood-chips have been placed upon [distant] strings as well as on strings nearby—only let the strings nearby be not in tune [with the others]—when one of the strings is struck, [the distant strings that are in tune] vibrate and shake off the wood-chips while the strings nearby are still and remain unaffected due to their not being in tune; and the distance between the tuned strings was in no way obstructive to their unity of affection nor did proximity overcome the lack of sympathy of the untuned strings. In the same way, the instrumental animal that is well-fitted for a suitable soul immediately possesses in sympathy the soul that will use it. And the soul's sympathy for this [body] but not that [body] is granted by its previous existence or even by the rotation of the universe that leads like to like.

Because the body is already well-fitted during its state of incompleteness in the womb, one would naturally wonder whether the soul enters the suitable body when it is still inside the womb.

But if the body, when it is still being carried in the belly, is not set—if there is still need for a maker and a tuner of strings, but not for a player of strings—why would we refuse to face the facts and expose ourselves to

serious absurdities by thinking that just because we did not observe the soul entering at birth, embryos emerge having already received this soul beforehand? (12,1,1-5, Wilberding transl., 46)

At the end of the second argument, the author explains that he has brought up these possibilities not because he finds them credible, but as evidence of the common opinion according to which « ensoulment was believed since antiquity [to take place] *after* the delivery from labour of the fetus » (16, 6,4-5, Wilberding transl., 53-54). The author draws a similarity between the harmony in the universe and in its parts and the harmony between the embryo and its suitable soul (16,6,3-14, Wilberding transl., 54):

And when it is taken into account that the universe is in agreement both with itself and with its parts, one must uphold his belief that just as with musical notes the last note in the scale preserves the harmony running through all the notes by being in tune with the middle note (*mese*), whereas if the last note (*proslambanomenos*) is too low or too high, it departs from the duple ratio (*ho diplasionos logos*), in the same way, the little body of the embryo, when it is in the belly and being tuned for soul, prior to receiving the adequate 'mode' (*tropon*) of harmony towards the soul, does not have this soul, but once it is tuned it immediately has present the soul that will use it. And as long as the harmony is lacking, the soul is not present, even if the cosmos is chock-full of souls.

There must be sympathy between embryo and soul for the soul to enter the embryo (16,8,3-7, Wilberding transl., 54):

even granting that the universe is covered with souls, on account of the fact that we have been tuned to a *single* soul, and when this harmony is dissolved, the body does indeed become receptive to other souls [...] but it is separated from its own harmonious soul.

Ideas associating the coming-into-being of the human being with the musical consonances through the arithmetic proportions were widespread and long lasting. As Barker and Parker evidenced, they found expression, among others, in musical treatises, too, like the *De musica* by Aristides Quintilianus (3,18, 117, 118-118, 2-16 Winnington-Ingram):

Let us now show how the coming-into-being of rational creatures is also in sympathy with the musical proportions. We shall find that a pregnancy that comes to fruition after seven monthly cycles corresponds to the

harmonic ratios. For if we take the number 6, the first *symbolon* of *genesis*, and put together the sequence of numbers which exhibit in relation to it the harmonic proportions, the epitritic (4:3), the hemiolic (3:2) and the double (2:1), the numbers in our sequence will be the following: 6, 8, 9, 12. If we add these numbers, they make 35, the number in the course of which, so they say, 7-month children are thoroughly formed; and if we multiply 35 by 6 we make 210, equal to the number of 7-month children's daily cycles. [...] Next, if we add to the same terms the rhythmical ratios, equal, double, hemiolic and epitritic, beginning from the unit, the numbers will be 1, 2, 3, 4. Of these the unit, which has no number preceding it in order, will stand to itself in equal ratio; 2 stands to 1 in double ratio, 3 to 2 in hemiolic and 4:3 in epitritic. By adding these numbers together we complete the number 10, and by adding this to 35 we shall make 45, the number in the course of which they say that 9-month children are formed. If we multiply 45 by 6, as this is a perfect number, we shall get the number which belongs to 9-month children, 270; for that is the number of daily cycles after which these children are born alive. (English transl. by Barker)

We don't know exactly when Aristides Quintilianus wrote his treatise (the time span is from the 1st to the 4th c. AD),⁴⁴ nor we do know whether Boethius had access to it. The concepts and theories that Aristides Quintilianus reports were however commonly shared by scholars. They were summarized, paraphrased and translated into Latin, and they were object of debates. Today we would define them as transdisciplinary and multidisciplinary. Boethius might have been inspired by this when he coined the expression *musica humana*—the way he coined *quadrivium*—to give it the structure it needed to be part of the musical knowledge for those who wanted to be philosophers. When he promised to come back to it, “de hac posterius dicam”, maybe he thought he could rely on common knowledge and afford to delay the explanation unlike other examples that he felt compelled to detail right away.

A hint is given by some medical texts, included in the late Alexandrian educational practice for beginners,⁴⁵ which circulated in Latin translations in the medical schools and cultured circles of Northern Italy, in the 5th-7th c.,⁴⁶ and, in particular, in Ravenna, where Boethius was appointed *magister officiorum* by Theoderic in 510. In particular, two manuscripts documented this circulation,

44 Barker 1989, 392.

45 Manetti 2015, 1201.

46 Everett 2012, 21-25, with bibliography.

both compiled in 9th century: Milan, Biblioteca Ambrosiana, G 108 inf.⁴⁷ and Paris, Bibliothèque Nationale, Latin 7027. Both manuscripts contained a selection of Hippocratic treatises, among which our topic is present in particular in: *De septimanis*⁴⁸ or *De Hebdomadibus* (Ambrosianus G 108 inf.; Parisinus lat. 7027) and *De victu*, a Latin version of the 'Hippocratic' *Peri diaites* (*On Regimen*), transmitted in a very corrupted text by Parisinus latinus 7027 (ff. 55r-66r).

The Latin version of the 'Hippocratic' *De Septimanis* or *De Hebdomadibus* is thought to have been compiled in the early 6th century, when other Hippocratic works were translated. *De Hebdomadibus* is one of the treatises of the Hippocratic corpus which begins with « extended statements about the physical composition and operation of the world at large, and approach the study of human physiology from this angle. We see this, for example, in *De Natura Hominis*, *De Flatibus*, *De Carnibus*, *De Victu*; it was the approach of Alcmaeon of Croton, Diogenes of Apollonia, and according to Plato of Hippocrates himself. The work known as *De Hebdomadibus* would appear to be a prime example of the type. The first twelve chapters are cosmological. They are dominated by two ideas: that everything in nature is arranged in groups of seven, and that the human body is constructed on the same pattern as the whole world. »⁴⁹ The relevance of the hebdomads to the development of the embryo is stated in the opening, as we read in the Latin version recovered by West from the two above mentioned manuscripts, the Ambrosianus G. 108 inf. and the Parisinus 7027:

Necesse est septinariam, quidem, habere speciem et definitiones septem dierum, in coagulationem seminis humani et, in, deformationem naturae hominis et, in, determinationem aegritudinum [...] ('Hippocrates', *Septimanis*, 1, *De hebdomadibus*, West 1971, 368; 2013, 153)

47 First described by Daremberg 1870. The first part of the ms. Ambrosianus G. 108 inf. contains three Hippocratic treatises: *Prognosticon* (ff. 1r-3v, 15r-19v), *De septimanis* (ff. 3v, 4r-15r), *De aëre, aquis et locis* (ff. 19bis r-21v). The second part presents four commentaries to Galen's works: *De sectis ad eos qui introducuntur* (ff. 22r-48v), *Ars medica* (ff. 48v-91r), *De pulsibus ad tirones* (ff. 92r-114r), plus *Ad Glauconem de medendi methodo* (ff. 114v-130r) with subscriptions (ff. 48 r-v, 91r, 114r). For up-to-date discussion about the subscriptions and the transmission, see: Manetti 2015, 1203; note 398. Parisinus lat. 7027 is described in BNF "Archives et Manuscrits": « 1° Hippocratis liber ad Maecenatem de natura generis humani: praemittitur fragmentum ejusdem Hippocratis de natura humana. 2° Ejusdem liber de aëre, de locis et de aquis. 3° Libellus de septimadis, sive de numero septenario: porro hic libellus in hoc codice tribuitur Hippocrati. 4° Ejusdem liber primus de diaeta: finis desideratur. 5° Ejusdem aphorismi: accredit commentarius, cujus finis desideratur. »

48 *De septimanis*, Roscher (ed.), 1913.

49 West 1971, 365.

The Latin version of the first book of *De victu* was compiled in the 6th century in Northern Italy, possibly in Ravenna, as suggested by the first editors of the complete treatise,⁵⁰ Carl Deroux and Robert Joly. The translator did not know Greek well. To underline the problems related with the edition, Deroux pointed out: « L'établissement d'un texte comme celui-ci est une entreprise nécessairement très conjecturale. Outre l'inconvenient du manuscrit unique et postérieur de plusieurs siècles à la version originale, il pose en effet le problème redoutable et souvent insoluble de la distinction entre fautes d'auteur et fautes de transmission. Comme dans tout travail d'édition, il s'agit de tenter de restituer ce que l'auteur a écrit et non ce qu'il aurait dû écrire, mais la tâche se trouve ici singulièrement compliquée par le fait que nous ne pouvons pas toujours nous fier au critère de la cohérence et de l'intelligibilité ». ⁵¹

The account of human nature in book 1 is devoted for the most part to embryology, and the growth and development of seeds. Chapters 6-31 of the Greek text of *Peri diaites* contain a complex and obscure passage about the moment when the male and female seeds, having achieved the right harmony, get inflamed and the embryological process starts by drawing nourishment from the food and breath that enter the woman. In particular, in chap. 8, the author suggests that achieving harmony within the concoction of male and female seeds is a prerequisite for the successful development of a human embryo.⁵²

We have no information on the Greek source text of the late ancient Latin translation and the Greek text used by the 1978 editors of *De victu* was the *Peri diaites*, 6-31, edited by Littré in the 19th. It has been commented from the musicological point of view since Delatte 1930⁵³ to Bartoš 2015 and Pelosi in this volume.⁵⁴

50 The first two chapters were edited by Diels 1910.

51 Deroux, Joly 1978, 130-131.

52 Bartoš, 2015, 133, 209.

53 Delatte 1930, 163, 170-171: « Il ressort avec certitude de ce texte, avant plus ample examen, que l'auteur compare le développement du fœtus à l'exécution d'un chant ou d'un air de musique, et, sans doute, le fœtus lui-même à un instrument de musique. » Then he concluded: « L'étude des théories de l'accordement de l'embryologie hippocratique nous mène encore à une autre conclusion: c'est qu'on peut considérer les doctrines pythagoriciennes dont nous avons tiré les éclaircissements nécessaires, et qui ne nous sont connues que par des témoignages tardifs, comme appartenant à l'ancien pythagorisme. On ne peut penser, en effet, que les Pythagoriciens postérieurs se soient inspirés à des œuvres hippocratiques [...]. D'autre part, les spéculations arithmétiques et harmoniques sont propres au pythagorisme ainsi que l'habitude de transférer les lois de ces sciences dans les autres domaines de l'étude de la nature. Il est donc fort vraisemblable que nous avons découvert dans les ouvrages hippocratiques une nouvelle trace d'influence de l'École de médecine italique. »

54 Pelosi 2016, in this volume.

A comparison between the 6th c. Latin version, as compiled by the 20th c. editors, and the Greek text, as edited and translated in the 20th-21st c., shows that the late Latin translator found the whole passage obscure, in particular, he did not understand correctly the musical terminology: '*structura recta*' for ἀρμονίης ὀρθῆς, 'trinitati' instead of συμφωνίας τρεῖς, while ξυλλήβδην διεξὸν διὰ πασέων disappeared. The Latin version of this passage—at least the version we can read now—is scarcely intelligible:

Deroux, Joly, 1978, 137, *Du régime* 1, 8, ll. 158-163 (Par. lat. 7027, f. 63r)

Hippocrates, *De Diaeta*, 1, 8, 2 (Littré 1849)

Bartoš 2015, 151 (i.e. transl. Barker 2007, 280 modified; Joly-Byl edition)

Reperta regionem et inuenta *structura recta* que sit conueniens trinitati per quam transiens uiuit et crescit ex his ipsis quibus est prius. Cum uero caruerit oportunitatem structure neque conuenerit grauia acutis, prima conuentio, si uero secunda generatio fuerit, per omnes, uno recidente, omnis sonus erit uacuuus. Neque enim possunt tanto decrementum qualitatem seruare ignorantes quid faciunt.

χώρην δὲ ἀμείψαντα καὶ τυχόντα ἀρμονίης ὀρθῆς ἐχούσης συμφωνίας τρεῖς, ξυλλήβδην διεξὸν διὰ πασέων, ζῶει καὶ αὖξεται τοῖσιν αὐτοῖσιν οἷσι καὶ πρόσθεν· ἦν δὲ μὴ τύχη τῆς ἀρμονίης, μὴδὲ ξύμφωνα τὰ βαρέα τοῖσιν ὁξέσι γένηται, ἦν ἢ πρώτη συμφωνίη, ἦν ἢ δευτέρη γεννηθῇ ἢ τὸ διὰ παντός, ἐνὸς ἀπογενομένου πάς ὁ τόνος μάταιος· οὐ γάρ ἂν προσαιείσειεν· ἀλλ' ἀμείβει ἐκ τοῦ μέζονος ἐς τὸ μείον πρὸ μοίρης· διότι οὐ γινώσκουσιν ὃ τι ποιέουσιν.

When it has moved to a different place, if it attains correct *harmonia* containing three concords, *syllabē, d'oxeōn* and *dia pasōn*, it lives and grows using the same nourishments as before. But if it does not attain *harmonia*, and the low-pitched elements do not become concordant with the high-pitched in the first concord or the second or that which runs through all (*dia pantos*), if just one of them is faulty the whole tuning is useless, as there can be no consonance. But they change from the greater to the less in an untimely fashion, because they do not know what they do.

On the contrary, the long excursion (12-24) on the resemblance between the nature of man and the arts and crafts is quite intelligible in the Latin version, too. The first *physis-techne* analogy concerns the art of seercraft (*diuination*, 12):⁵⁵

Ego enarrabo artis manifestas [in] passionibus homines cum sint similes, manifestis <et occultis. Ita diuination: manifestis> scire occulta et occultis manifesta, presentibus etiam rebus future et mortuis [et] uiuentia et insipientibus sensu. Hęc unus quidem recte, alius uero non recte potest adsequi. Quę omnia uita et natura humana imitantur. Vir conmixtus mulieri facit infantem, rem occultam manifesto sciens quod ita erit.

Then a list follows with the analogies between passions and senses in human soul and body and the art of iron-making (*ferrarie*, 13), the work of fullers (*fol-lonis*, 14), cobblers (*sutores*, 15), carpenters (*fabri tegnarii*, 16), builders (*structores*, 17), the art of music-making and cooking (*de musicis, coci*), the work of curriers (*coriarii*, 19), the arts of gold-working and grain producing and grain cooking (*aurum alii operantur, <homines frumentum incidunt, lauant, molant et cocto utuntur*, 20), the work of statue-makers (*statuarii*, 21), basket-makers (*figulus*, 22), the art of grammar (*ars gramatica*, 23) and the arts of cultivated men (*studium litterarum et exercitium*, 24).

Chapter 18, red coloured titled 'De musicis' in the Parisinus codex [fig. 1], contains a description of the analogies between musical and culinary compositions, and between sound in music and the tongue as an organ of taste and speech, which produces sound.

Chapter 23 describes grammar as a knowledge and experience common to all human beings: both he who knows letters and he who knows them not (*Hęc enim agit homo et his qui litteras nouit et ipse qui non nouit litteras.*), because also he who does not know letters has got human senses all the same. And the point is that here there are seven senses:⁵⁶ to the traditional five—sight, hearing, smell, taste and touch—the author added breathing and speech:

55 Deroux, Joly 1978, 139, ll. 217- 221.

56 Some further epistemological remarks on this subject were made by Bartoš 2015, 144. For the symbolic value of number seven as well as the vagueness of the terminology used to describe the nature of the relationship between the seven parts of the world and the seven parts of the human body, a relationship "expressed indifferently in terms of similarity, imitation (of man by the world!), or identity", see West 1971, 377, quoted by Bartoš 2015, 141 note 165.

& qđ diuſū fuerit ēpaſſet munū hſcuane tāt
 uile eſt qđ fuerit factū. **DE MUSICIS**

Muſicu organū ſic debet eſſe: pñ mod⁹ & gomea ēpa
 ſignationē ut qđ uult illud ſignificet & cōter
 mone & ēiecturā & ſemet ipſiſ diſſimilē mōe cōci
 degre uide acro nomme quidē ſimiliū ſono uero
 diſſimilimulta paſa diuerſa maxime cōueniunt.
 que aū minū ſuaſa fuerit iocunditas plureſ in
 mutationeſ & uariē maxime obiectant. Coci
 pulmēta cōdiunt hominib⁹. & diuerſi ſuaſa ēpe
 cōticeſ & & eiſ dē none eoſ dē pparent cibos homi
 nib⁹. & aū cōmū ſimilē fuerit nulla habebit ſua uita
 tē & ſua paretā munū fuerit mixta neq; hoc rec
 te ſit. **ITĒ DE MUSICIS**

Tangunt ſonus. marā mūſicā alia quidē uſū. alia
 uerō debet ſumit a lingua mūſicā imitātū. ſciſſ
 dulce & acutū & ad cōſidū & diuſ ſor ſibi q; cōueni
 ſitū pcutiſ ſonū ſū ſū ac cōr ſū & neq; illa
 que ſuſoſ ſunt de cōſū pcaſſa recte poſſunt uocare
 reſonare bōne. ergo lingua ēpoſita & uſu nentib⁹
 modulū reddat ſonoſ abſq; ulla rēp hēſionē cori
 aſi cōndit fſeant lato bant & pētinant hſcūne

FIGURE 1 Paris, Bibliothèque Nationale, ms. Latin 7027, f. 59 v.

actum aurium sonum, oculorum uisum, narium odoratum, lingue gustatum suavis et minus suavis odoribus, *oris* intellectum, <corporis tactum>, calidi et frigidi spiritus transitum interiorem et exteriorem.

Deroux, Joly, 1978, 141, *Du régime* 1, 18, (Par. lat. 7027, f. 59v)

Hippocrates, *De Diaeta*, 1, 18 (Littre, VI, 1849, 492)

Bartoš 2015, 153-154 (i.e. transl. Jones, significantly modified; Joly-Byl edition)

XVIII I [De musicis]
Musicum organum sic debet esse: primo erit in ea compaginationem ut quod uult illud significet *concentu harmonie* et coniecture ex semet ipsis dissimiles, non *eaedem*, *de acri*, *de graui acte*, nomine quidem similitium, sono uero dissimilium. Multa uaria [diuersa] maxime conueniunt. Que autem minus uaria fuerint <minime conueniunt. Si quis totum simile fecerit, nulla erit> iocunditas : plures inmutationes et uarie maxime ob/ectant. 2 Coci pulmenta con-diunt hominibus ex diuersis, uaria compellentes et ex eisdem non eosdem preparant cibos hominibus. Si autem totum similem fuerit, nulla habebit suauitatem et si iam parata in unum

(18.) Μουσικῆς ὄργανον ὑπάρξαι δεῖ πρῶτον, ἐν ᾧ δηλώσει ἃ βούλεται ἁρμονίῃ· συντάξεις ἐκ τῶν αὐτῶν οὐχ αἱ αὐταί, ἐκ τοῦ ὀξέος, ἐκ τοῦ βαρέος, ὁνόματι μὲν ὁμοίων, φθόγγῳ δὲ οὐχ ὁμοίων· τὰ πλεῖστα διάφορα μάλιστα ξυμφέρει, καὶ τὰ ἐλάχιστα διάφορα ἥκιστα ξυμφέρει· εἰ δὲ ὅμοια πάντα ποιήσῃ τις, οὐκ ἔνι τέρψις· αἱ πλεῖστα μεταβολαὶ καὶ πολυειδέσταται μάλιστα τέρπουσιν. Μάγειροι ὄψα σκευάζουσιν ἀνθρώποισι διαφόρων, συμφόρων, παντοδαπὰ ξυγκρίνοντες, ἐκ τῶν αὐτῶν οὐ τὰ αὐτὰ, βρώσιν καὶ πόσιν ἀνθρώπων· ἣν δὲ πάντα ὅμοια ποιήσῃ, οὐκ ἔχει τέρψιν· οὐδ' εἰ ἐν τῷ αὐτῷ πάντα ξυντάξειεν, οὐκ ἂν ἔχοι ὀρθῶς. Κρούεται τὰ κρούματα ἐν μουσικῇ τὰ μὲν ἄνω, τὰ δὲ κάτω.

From the same components come harmonious compositions (ἁρμονίης συντάξεις) that are not the same, from the high and from the low (ἐκ τοῦ ὀξέος καὶ ἐκ τοῦ βαρέος), which are alike in name but not alike in sound. Those that are most diverse make the best harmony (τὰ δὲ ἐλάχιστον διάφορα ἥκιστα συμφέρει); those that are least diverse make the worst. If anyone composed a piece all on one [component], it would fail to please. It is the greatest changes and the most varied that please the most. Cooks prepare for men dishes of ingredients that disagree while agreeing, mixing together things of all sorts, from things that are the same, things that are not the same, to be food and drink for man. If the cook makes all alike there is no pleasure in them

(cont.)

Deroux, Joly, 1978, 141, <i>Du régime</i> 1, 18, (Par. lat. 7027, f. 59v)	Hippocrates, <i>De Diaeta</i> , 1, 18 (Littre, VI, 1849, 492)	Bartoš 2015, 153-154 (i.e. transl. Jones, significantly modified; Joly-Byl edition)
fuerint mixta, neque hoc recte fit. 3 [Item de musicis.] Tanguntur sonus in artem musicam, alia quidem sursum, alia uero deorsum sunt. Lingua musicam imitatur, sciens dulcem et acutum [et] adcidentium et diuersa sibique conuenientia, percutiens sonum sursum ac deorsum et neque illa que sursum sunt deorsum percussa, <neque illa que deorsum sunt sursum percussa> recte possunt uocales resonare. Bene ergo lingua composita ex conuenientibus modulis reddit sonos absque ulla reprehensionem.	Γλώσσα μουσικὴν μιμέεται διαγινώσκουσα μὲν τὸ γλυκὺ καὶ τὸ ὀξύ τῶν προσπιπτόντων, καὶ τὰ διάφωνα καὶ ξύμφωνα· κρούεται δὲ τοὺς φθόγγους ἄνω καὶ κάτω, καὶ οὔτε τὰ ἄνω κάτω κρούμενα ὁρθῶς ἔχει οὔτε τὰ κάτω ἄνω· καλῶς δὲ ἡρμοσμένης γλώσσης, τῇ συμφωνίῃ τέρψις, ἀναρμόστου δὲ λύπη.	(εἰ δὲ ὅμοια πάντα ποιήσῃ τις, οὐκέτι τέρψις); and it would not be right either if he were to compound all things in one dish. The notes struck while playing music are some high, some low. The tongue (γλώσσα) resembles music in distinguishing (μουσικὴν μιμεῖται διαγινώσκουσα), of the things that touch it, the sweet and the acid, the discordant from the concordant. Its notes are struck high and low, and it is well neither when the high notes are struck low nor when the low are struck high. When the tongue (γλώσσα) is well in tune the concord pleases, but there is pain when the tongue is out of tune.
Deroux, Joly, 1978, 142, <i>Du régime</i> 1, 23 (Par. lat. 7027, f. 60v)	Hippocrates, <i>De Diaeta</i> , 1, 23 (Littre, VI, 1849, 494)	Bartoš 2015, 144 (i.e. transl. Jones, passim modified; Joly-Byl edition)
XXIII I Ars grammatialis est : elementorum est compositio, signa uoci humane, uirtus transacta meminisse,	Γραμματικὴ τοιόνδε· σχημάτων σύνθεσις, σημήια φωνῆς ἀνθρωπίνης, δύναμις τὰ παροισχόμενα μνημονεύσαι, τὰ	The art of writing (γραμματική) is characterized as follows: the putting together of figures, symbols of human voice

Deroux, Joly, 1978, 142, <i>Du régime</i> 1, 23 (Par. lat. 7027, f. 60v)	Hippocrates, <i>De Diaeta</i> , 1, 23 (Littre, VI, 1849, 494-6)	Bartoš 2015, 144 (i.e. transl. Jones, passim modified; Joly-Byl edition)
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futura significare. Scientiam septe uel quinque litteris nota. Hęc enim agit homo et his qui litteras nouit et ipse *qui non* nouit litteras. 2 Septem uocabulis intellegunt hominis : actum aurium sonum, oculorum uisum, narium odoratum, lingue gustatum suauis et minus suauis odoribus, oris intellectum, <corporis tactum>, calidi et frigidi spiritus transitum interiorem et exteriorem. Per hęc scientia est humana.

ποιητέα δηλώσαι· δι' ἑπτὰ σχημάτων ἢ γνῶσις· ταῦτα πάντα ἄνθρωπος διαπρήσσεται καὶ ὁ ἐπιστάμενος γράμματα καὶ ὁ μὴ ἐπιστάμενος. Δι' ἑπτὰ σχημάτων καὶ ἡ αἴσθησις ἢ ἀνθρώπων, ἀκοή ψόφων, ὄψις φανερῶν, ῥὶν ὀσμῆς, γλῶσσα ἡδονῆς καὶ ἀηδίας, στόμα διαλέκτου, σῶμα ψαύσιος θερμοῦ ἢ ψυχροῦ, πνεύματος διέξοδοι ἔσω καὶ ἔξω· διὰ τούτων γνῶσις ἀνθρώποισιν.

(σημεῖα φωνῆς ἀνθρωπίνης), a power to recall past events, to set forth what must be done. Through seven figures comes knowledge (ἢ γνῶσις). All these things a man performs, both he who knows (ὁ ἐπιστάμενος) letters and he who knows them not (ὁ μὴ ἐπιστάμενος). Through seven figures men acquire perception (ἢ αἴσθησις); there is hearing of sounds, sight for the visible, nostrils for smell, tongue for pleasant or unpleasant tastes, mouth for speech, body for touch, passages outwards and inwards for hot or cold breath. Through these men acquire knowledge (γνῶσις).

The analogy between *physis* and *techne* implies a two-way relationship between nature and culture in a holistic view of the human being as a product of body and soul in a network of cultural analogies and similarities which form the cultural background in which the human being develops. It makes sense if we recall what the author wrote at the beginning of the treatise:

Nunc uero, cum multi scripserint, nec unus quidem in quod rectum est aut scriui oportuit *potuit* agnoscere. Singuli sane prout sors tulit aliquantum dixerunt, non tamen ad plenum totum potuerunt inuenire.

In a medical theory which considers the human being as a whole—*ad plenum totum*—a theory which we would call now ‘anthropological’, grammar as a science is defined as ‘humana’ (*Per hæc scientia est humana.*). Maybe it is in this cultural context that Boethius defined the second division of music « *musica humana* ».

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Music for Life: Embryology, Cookery and *Harmonia* in the Hippocratic *On Regimen*

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Abstract

The first book of the Hippocratic treatise *On Regimen* includes two interesting references to music. Somewhat obscurely, musical notions are evoked in the explanation of embryological processes (1.8) and in a comparison between *technai* and human nature (1.18). The paper analyses both the passages, mainly focusing on the interplay between philosophical and musical notions. It is argued that the musical analogies drawn in these passages are permeated by some of the philosophical concepts widely exploited in Book 1, in Heraclitean fashion. In particular, it is claimed that in *Vict.* 1.8 *harmonia* conveys the notion of ‘organised structure’, rather than numerical concepts, and that *Vict.* 1.18 hinges on *harmonia* as composition of unlike elements, which lies at the basis of cookery and the possibility for the tongue to appreciate its creations.

Keywords

embryology – music – Heraclitus – Pythagoreanism – mimesis

...

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... Good sound is not in the ear,
good taste is not in the mouth...

Eat Drink Man Woman, dir. ANG LEE, 1994



The Hippocratic treatise *On Regimen* is a long and well-structured treatise encompassing a wealth of topics at the crossroads between medicine and philosophy. At the very beginning of the treatise,¹ the author acknowledges that an accurate inquiry into the central topic, i.e. dietetics, necessarily requires a preliminary investigation on the nature of man in general. This widening of the perspective brings about one of the most interesting accounts on anthropology preserved from an early period of ancient Greek philosophy, mainly based on theories borrowed from Heraclitus, Empedocles and Anaxagoras.

In this philosophical account, the author makes two interesting, albeit obscure, references to music, employing musical notions in the treatment of embryology and in a comparison between human nature and the arts. The use of notions and conceptual models borrowed from musical theory and practice in the account of biological, medical and cosmological phenomena is very common in ancient Greek writings, and it is often connected to methods of argumentation and explanation by means of analogies, whose employment is remarkable, for instance, in the embryological treatises of the Hippocratic collection.² In an attempt to detect the specific strategy that the author of *On Regimen* adopts in drawing musical analogies, in this paper I will mainly focus on the interplays between musical and philosophical doctrines in the passages of *On Regimen* devoted to music. I shall argue that in *Vict.* 1.8 and 1.18 the author combines musical notions with the key concepts of the philosophical

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1 122.22-3. Throughout the paper, references to specific passages of *On Regimen* are given according to the Joly-Byl edition (*Corpus Medicorum Graecorum* 1.2.4, 2nd ed. 2003), by simply referring to the page numbers and lines (and, occasionally, the chapters).

2 Lloyd 1966, 345-60.

account outlined in Bk. 1, so as to develop in a highly interesting manner the link between musical and philosophical fields.

Music and Embryology

χώρην δὲ ἀμείψαντα καὶ τυχόντα ἀρμονίης ὀρθῆς ἐχούσης συμφωνίας τρεῖς, συλλαβήν, δι' ὀξέων,³ διὰ πασέων, ζῶει καὶ αὖξεται τοῖσιν αὐτοῖσιν, οἷσί περ καὶ πρόσθεν· ἦν δὲ μὴ τύχη τῆς ἀρμονίης, μηδὲ σύμφωνα τὰ βαρέα τοῖσιν ὀξέσι γένηται ἐν τῇ πρώτῃ συμφωνίῃ ἢ τῇ δευτέρῃ ἢ τῇ διὰ παντός, ἐνὸς ἀπογενομένου πᾶς ὁ τόνος μάταιος· οὐ γὰρ ἂν προσαείσαι. ἀλλ' ἀμείβει ἐκ τοῦ μέζονος ἐς τὸ μείον πρὸ μοίρης· διότι οὐ γινώσκουσιν, ὅ τι ποιέουσιν.

(*Vict.* 1.8.132.6-11)

When it has moved to a different place, if it⁴ attains correct *harmonia* containing three concords, *syllabē*, *di'ōxeōn* and *dia pasōn*, it lives and grows using the same nourishments as before. But if it does not attain *harmonia*, and the low-pitched elements do not become concordant with the high-pitched in the first concord or the second or that which runs through all (*dia pantos*), if just one of them is faulty the whole tuning is useless, as there can be no consonance. But they change from the greater to the less in an untimely fashion, because they do not know what they do.

(Transl. Bartoš 2015, 151)

In his monograph on *On Regimen*, Robert Joly hinted at the unfortunate possibility that, without new discoveries of philosophical texts from the fifth century BC, some passages of the first book are doomed to remain obscure. Perhaps *Vict.* 1.8.132.6-11 is among the passages Joly was thinking of when writing these words. Indeed, Joly considered the overall section from ch. 6 to ch. 8 “le passage le plus obscur du Livre 1”.⁵

In order to understand the embryological theory presented here, a brief summary of the author's philosophy of nature described at chs. 3-4 is necessary. The author's main assumption is that human beings, like all other animals, are made up of two fundamental and complementary substances: water, cold and wet, and fire, hot and dry. Mixtures of these elements constitute seeds

3 συλλήβδην διεξίον θ: συλλήβδην διεξιών M: corr. Bernays et A. Delatte, *Les harmonies*, p. 164.

4 The mixture of male and female seeds, or the embryo.

5 Joly 1960, 19, 26.

or particles that commingle and grow in the human body, and then separate into the male sperm and its female counterpart.⁶ In ch. 8 the author resorts to specific musical notions, and an elaborate musical account, in order to explain the merging of male and female seeds in the woman's body and the development of the embryo. Let us first go into the details of this musical description and then try to understand its role in the treatise, and the musicological and philosophical theories underlying it.

At the outset of 132.6-11, two completely different situations are described as possible consequences of the change of position of the seeds: either the seeds attain a correct *harmonia* (τυχόντα ἁρμονίης ὁρθῆς), or they do not attain *harmonia* at all (μὴ τύχη τῆς ἁρμονίης).⁷ It is important to recognize here that the achievement of this correct *harmonia* is *essential* to the survival and the healthy growth of the embryo: it ensures that the embryo will “live and grow”. The negative, possibly fatal, effects of the opposite situation can instead be inferred from the term μάταιος (‘vain’), at the end of the passage.⁸

The vital harmony is described as being made up of three *symphoniai*, namely the fourth, the fifth and the octave. “συλλαβήν, δι’ ὀξέων” is the result of an emendation proposed both by Bernays and, independently, by Delatte, whereas the MSS text reads: συλλήβδην διεξιόν (or διεξιών, see above n. 3). The conjecture “συλλαβήν, δι’ ὀξέων” restores a perfectly intelligible text, which mentions the three fundamental concords after having introduced them as *symphoniai*.⁹

In musical terms, *harmonia* here has the meaning of an organised structure of sounds, consisting of the fundamental concords of fourth, fifth and octave. The opposite condition is, in musical terms, clear as well. The absence of *harmonia* is described as a situation in which the low-pitched sounds are not consonant with the high-pitched ones, in any of the three concords. It is

6 On the theory of seeds, see Bartoš 2009, 19-25. Both male and female contribute to generation through seeds, as it is clear from ch. 27 (144.4-5), see Lonie 1981, 119, and Jouanna 1999, 271.

7 ὁρθῆς ἁρμονία is tantamount to ἁρμονία without attributes, since the opposite condition is expressed by the words “μὴ τύχη τῆς ἁρμονίης”.

8 See also the sentence “they change from the greater to the less” (132.10-1: ἀμείβει ἐκ τοῦ μέζονος ἐς τὸ μείον), which describes processes of ‘separation and diminution’, instead of ‘aggregation and augmentation’.

9 In the wake of Bernays (1885, 17) and Delatte (1930, 164), most scholars have accepted the emendation (including Littré 1962, LIV), but see the exception of Jones 1959. As a further reason to accept this correction, I would like to point out that the reference to the “first concord or the second or that which runs through all” in the sentence “μὴ τύχη τῆς ἁρμονίης, μηδὲ σύμφωνα τὰ βαρέα τοῖσιν ὀξεσι γένηται ἐν τῇ πρώτῃ συμφωνίῃ ἢ τῇ δευτέρῃ ἢ τῇ διὰ παντός” is all the more comprehensible if each concord has been previously mentioned.

rather unclear, however, how this elaborate musical construction fits within the embryological discussion, and why the author resorts to such a complex picture in order to explain this matter.

Musical notions are used to explain embryological topics in other ancient texts as well. To keep to the Hippocratic collection, the embryological treatise *On the Seven-month Child* mentions the musical notion of *harmonia* in a discussion of the chronological stages of the embryo's development.¹⁰ It is likely that such theories bringing together music and embryology had some influence on Plato's enigmatic programme of musical eugenics, in *R.* 546a-d; and these doctrines are certainly echoed in later musical writings: in Ptolemy's *Harmonics* (3.4.95.11-6 Düring) and in Aristides Quintilianus' *De musica* (3.18.117.18-118.28, 3.23.124.5-26 Winnington-Ingram). Furthermore, many ancient sources ascribe to the Pythagoreans elaborate connections between musical notions and the growth of the embryo.¹¹

A common feature of the above-mentioned theories is the emphasis on the numerical structure of music, as this is the basis of the analogy between music and embryology. Indeed, the analogy is between the mathematical ratios of music and the embryological calendar describing the chronological stages in the growth of the embryo. From this point of view, I would suggest that these theories find a parallel in the very famous doctrines that employ musical notions to explain astronomical and cosmological phenomena: the musical-astronomical theories too are grounded in numerical correspondences, namely those between music and heavenly events.¹²

To date, scholars have generally considered the theory of *Vict.* 1.8 to be analogous to other theories on music and embryology. Consequently, they have interpreted the passage as establishing a connection between the

10 *Septim.* 9 (7.448.16-9 Littré). Analogous numerological considerations, based on the importance of the number 7, are to be found in the embryological discussion contained in *Carn.* 19 (8.608.22ff. Littré), even though references to music do not occur there. References to notions often linked to music, such as those of proportion and ratio (συμμετρία and λόγος), appear in Aristotle's theory of generation at *GA* 4.767a13-7.

11 *Plu. An. procr.* 12.1018B; *D.L.* 8.29; *Censorinus DN* 9.3 and 11.3 (recounting Pythagorean theories contained in Varro's *Tubero de origine humana*); *Theol. Ar.* 63 (De Falco). Further references to music in embryology in *Procl. in R.* 2.34.25-35.23 (Kroll); *Macrob. In Somn.* 1.6.14. On these passages, see Parker 1999, 520-8; Lehmann 2010; Barker forthcoming; Restani's article on pp. 161-190 of this journal.

12 It can hardly be a coincidence that some of the works I have mentioned as evidence of theories on music in embryology also contain theories on the relationship between music and astronomy, see e.g. *Plu. An. procr.* 1029C; *Ptol. Harm.* 100-11; *Aristid. Quint.* 120.8-24; *Censorinus DN* 13; *Macrob. In Somn.* 2.3.12-4.15; *Procl. in R.* 2.236ff.

chronological stages in the development of the embryo and the numerical ratios of the concords.¹³ Recently, Andrew Barker has pointed out that the author of *On Regimen* is not interested in the mathematical description of the *harmonia*, as a model for the healthy development of the human foetus: what this medical writer borrows from the musical field is the model of a harmonious structure, namely the octave-attunement.¹⁴

As far as embryology is concerned, it seems to me worth noting that unlike other Hippocratic treatises, *On Regimen* does not dwell on the numerical aspects of the embryo's development. A brief reference to the stages in the embryological calendar appears only in ch. 26: the theory there presented is analogous to the doctrine of other Hippocratic works (the seven-month and nine-month embryos are the only viable ones), but it is clear that the author is not interested in developing this aspect of embryology. Furthermore, in ch. 26, where a reference to a calendar appears, no link is drawn with the musical matter dealt with in ch. 8.

The idea that *Vict.* 1.8, like other passages on music and embryology, establishes an analogy between the numerical ratios in music and the numerical basis for the foetus' development seems to derive from a hasty connection between music and number, via Pythagoreanism. Admittedly, a link between *Vict.* 1.8 and Pythagoreanism is not to be excluded. There are evident analogies between the musical terminology of *Vict.* 1.8 and the vocabulary used by the Pythagorean Philolaus in fr. 6.¹⁵ Both the author of *On Regimen* and Philolaus

13 Delatte (1930, 165-6) thinks that in *Vict.* 1.8 there is a correspondence between the length of the strings that produce concords and the numbers of the days characterizing the development of the embryo; but he admits that this is but a supposition, unless other texts, namely D.L. 8.29, Censorinus *DN* 9 and 11, and *Septim.* 9 are taken into consideration. For analogous numerological interpretations of *Vict.* 1.8, see Duysinx's 'Note additionnelle' in July 1967, 111-14 and Lehmann (2010, 177), who sees in *Vict.* 1.8 l'"analogie entre les périodes de développement de l'embryon et les accords musicaux" (my italics). Burkert (1972, 262) used *Vict.* 1.8 to prove that "the numerical ratios have a more special role in embryology". The starting point of Burkert's treatment of numerology in Hippocratic treatises is *Vict.* 1.2.124.17-20 (εἰ μὲν γὰρ ἦν εὐρετόν ἐπὶ τούτοις πρὸς ἑκάστου φύσιν σίτου μέτρον καὶ πόνων ἀριθμὸς σύμμετρος μὴ ἔχων ὑπερβολὴν μήτε ἐπὶ τὸ πλεόν μήτε ἐπὶ τὸ ἔλασσον, εὐρητο ἂν ὑγιεινὰ τοῖσιν ἀνθρώποισιν ἀκριβέως), where indeed the notion of number is clearly used. Burkert comments that, according to the author of *On Regimen*, "Health, in 'precise' terms, is a numerical ratio". Whether or not Burkert's interpretation of *Vict.* 1.2.124.17-20 is correct, it is indisputable that, when the author of *On Regimen* introduces musical analogies, he is referring neither to numbers nor to ratios.

14 Barker 2007, 280-1; see also Barker 2005, 91 n. 8.

15 44 B 6 DK: ... ἀρμονίας δὲ μέγεθος ἐστὶ συλλαβὰ καὶ δι' ὁξείαν ...

employ συλλαβή and δι' ὀξέων to mean respectively the concord of fourth and the concord of fifth, instead of the canonical terms in later sources—διὰ τεσσάρων and διὰ πέντε.¹⁶ However, since both συλλαβή and δι' ὀξέων seem to belong to an early phase of Greek thought on music, their occurrence in *On Regimen* seems to me more a clue suggesting an early date of the treatise¹⁷ than evidence of a particular relationship with Philolaus' music theory.¹⁸ In the following pages, I shall argue that, despite the references to terms deeply imbued with Pythagoreanism—such as *symphoniai*, *harmonia*, and the name of the three fundamental concords—the notions underlying the musical analogy of *Vict.* 1.8 are more closely linked to the philosophical background of the first

16 συλλαβή, from συλλαμβάνω 'grasp together' (but also, interestingly, 'conceive, become pregnant', see e.g. Hp. *Coac.* 540 (5.708.2 Littré) and Arist. *HA* 7.1.582a19, *GA* 1.19.727b8) and δι' ὀξέων, lit. 'through the high-pitched', probably stem from musical practice on string instruments, see Porph. in *Harm.* 97.2-5 (Düring). On both terms in Philolaus' fr. 6, see Huffman 1993, 162-3 and Barker 2007, 264. On this ancient terminology, see Nicom. *Harm.* 252.4-14; Porph. in *Harm.* 96.29-97.11; Aristid. Quint. 1.8.15.8-10; Procl. in *R.* 1.213.1-3 and Olymp. in *Phd.* 169.16-18 (Norvin). Συλλαβή and δι' ὀξεῖων, instead of διὰ τεσσάρων and διὰ πέντε, occur in the musical treatise preserved in PTeb. III.694, and δι' ὀξεῖων also recurs in ps.-Arist. *Pr.* 19.34.920a24, 19.41.921b1.

17 There is no scholarly agreement on the date of *On Regimen*. An early dating—to the late fifth/early fourth century BC—has been championed by Fredrich (1899), Jones (1959, XLVI), Joly (1960, 203-9; 1967, XIV-XVI), Kahn (1960, 189 n. 2) and Jouanna (1999, 408-9). A later date, around 350 BC, has been argued for by Jaeger (1944, 36-40), Kirk (1962, 26-9), and West (1992, 371-2). A thorough account of this debate is in Joly-Byl 2003, 44-9. While being far from decisive, the use of συλλαβή and δι' ὀξέων constitutes a further issue in this debate.

18 The Pythagorean inspiration of *Vict.* 1.8 has been highlighted by Fredrich (1899, 159), Delatte (1930), Joly (1960, 28-9, 34), Burkert 1972, 262-4, and Joly-Byl 2003, 28, 239-40. Bourgey (1953, 128 and n. 2), labelling the observations on *harmonia* in 1.8 as "spécifiquement pythagoriciennes", observes that Heraclitus' (22 B 51 and 54 DK) and Empedocles' (31 B 27 and 96 DK) notion of *harmonia* is "un équilibre purement matériel qui existe entre des choses différentes ou des parties différentes d'un même tout", while the *harmonia* of *Vict.* 1.8 "est au contraire celle qui s'établit entre les sons, elle est régie par des relations mathématiques". As I shall argue, a thorough analysis of *Vict.* 1.8 and its philosophical background strongly suggests that its notion of *harmonia* conveys the idea of the material arrangement of different parts far more than it does any numerical concept. On the hypothesis that for the musical analogy of *Vict.* 1.8 the author drew upon Philolaus, see Huffman 1993, 152. Barker (forthcoming, 10) has recently stated that nothing in *Vict.* 1.8 "is peculiarly Pythagorean" and that the (alleged) Pythagorean inspiration of the passage cannot be established by invoking the use of συλλαβή and δι' ὀξέων, since these terms "are not the special preserve of Pythagorean theorists".

book, and in particular to its Heraclitean overtone, than to Pythagorean/mathematical music theory.

As we have seen, *Vict.* 1.8 is part of an opening section of the treatise (chs. 3-10) mainly devoted to outlining the essential features of the author's philosophy of nature. In 1.8 musical notions interlace with concepts that are crucial in this first section, namely:

- the spatial notions of position and change of position;¹⁹
- the concepts of mingling and separation.²⁰

The concepts of position and movement are pivotal ones in the first chapters of *Vict.* 1: they are expressed in the Heraclitean section of ch. 5, especially through the sentence “χωρεῖ δὲ πάντα καὶ θεῖα καὶ ἀνθρώπινα ἄνω καὶ κάτω ἀμειβόμενα” (128.12); furthermore, they are at the core of the cellular processes that characterise human life in ch. 6. At the same time, the first chapters of *Vict.* 1 clearly state that generation implies the notions of separation and mingling, as ‘becoming’ and ‘perishing’ are nothing but a ‘mingling’ and ‘separating’ (ch. 4). As we have seen, the first part of ch. 8 emphasises both these notions: the seeds keep *the same configuration* (132.1: τὴν αὐτὴν τάξιν) until they are compelled, by the lack of nourishment and space, *to pass* into a larger place; then, they *separate and commingle*, according to a precise biological destiny. Another concept deserves consideration here: the notion of τάξις. It occurs three times in *On Regimen*, always in relation to embryology or closely related topics (chs. 6, 8, 27). In ch. 27 (144.12-3), where the result of the seeds’ commingling in an infertile environment is described—a situation that may be compared to the inharmonious failed conception of *Vict.* 1.8—the author uses the expression ‘διαλύεται ἐς τὴν μείω τάξιν’.²¹ My hypothesis is that the musical analogy of

19 “...ἀμείβει ἐς τὴν μέζονα χώραν...” (1.8.132.2-3), “χώραν δὲ ἀμείψαντα...” (1.8.132.6), “ἀλλ’ ἀμείβει ἐκ τοῦ μέζονος ἐς τὸ μείον...” (1.8.132.10); other significant occurrences of these notions in 1.5.128.12, 1.6.130.5-8, 1.7.130.23-4. An emphasis on the notion of ‘place’ is to be found also in *Hp. Nat. Puer.* 17 (7.496.17ff. Littré): the importance of this notion, both in *Nat. Puer.* and in *Vict.* 1, and its link to the concept of structure, is stressed by Lonie (1981, 178-80) who interestingly attempts to reconstruct the notion of ‘structural pattern’ in pre-Aristotelian embryology. As I shall argue, the concept of ‘structure’ is at the core of the musical analogy of *Vict.* 1.8.

20 “...ταῦτα διακρίνεται πρῶτα, ἅμα δὲ καὶ συμμίσγεται· ἕκαστον μὲν γὰρ διακρίνεται, πάντα δὲ ταῦτα συμμίσγεται” (1.8.132.4-6); other occurrences of these notions in 1.4.126.27-8, 128.7-10.

21 The expression seems to be the exact opposite of “ἐξαλλάσσει ἐς τὴν μέζω τάξιν”, used to describe the growing of the seeds in the human body in ch. 6 (130.7). The notion of τάξις will have a specific use in later music theory, see e.g. *Aristox. Harm.* 6.12-3 (Da Rios):

ch. 8 is essentially based on the concept of organised structure, which characterises human life in *Vict.* 1, as the result of processes of spatial movement and mingling/separation.²²

In *Vict.* 1.8, both the descriptions of the viable and the unviable conditions define *harmonia* as a concordant combination of different elements, by stressing the notion of appropriate organization of the parts into a whole: in order to have *harmonia*, it is necessary to have all three *symphoniai*. The happy result of the presence of a *harmonia*, made of all parts, is life. Failure in the conception process is caused by the absence of *one* (ένός) element, which makes *the entire structure* (πάς ὁ τόπος) unproductive.²³ From this perspective, the three fundamental concords are not considered in their numerical essence, but as the appropriate and well-connected components of a harmonious whole: it is the notion of arrangement of parts, and not the notion of numerical ratio, that is essentially conveyed by the reference to *harmonia* in *Vict.* 1.8.²⁴ If this interpretation is close to the mark, we have an explanation for the final obscure sentence in 132.6-11, concerning some sort of unconsciousness of the seeds. As an organised structure, musical *harmonia* perfectly expresses the idea of a goal-oriented and ‘aware’ relationship between the parts and the whole. When the *harmonia* is not achieved, the seeds are driven by unconsciousness: this

τὴν πᾶσαν τῆς μελωδίας τάξιν, 10.4-8: οὔσης δὲ θαυμαστῆς τῆς τάξεως περὶ τὴν τοῦ μέλους σύστασιν... οὐδὲν δὲ τῶν αἰσθητῶν τοσαύτην ἔχει τάξιν οὐδὲ τοιαύτην. In *Vict.* 1, a musical application of the concept is to be found in ch. 18 (138.15: Ἀρμονίης συντάξεις), see below pp. 201 ff.

- 22 Along with τάξις, the notion of arrangement is conveyed by διακοσμέω, see 1.6.128.24-5: “All other things are set in due order (διακοσμεῖται), both the soul of man and likewise his body”; 1.9.132.21-3: “The fire... arranges (διακοσμεῖται) the body according to nature”; 1.10.134-5 “...all things were arranged (διεκοσμήσατο) in the body...by fire” (Jones’ translations).
- 23 It is probably not by chance that in these last lines, where the idea of the *whole* structure is strongly emphasised, the author uses διὰ παντός (1.8.132.9) to mean the octave, instead of the more common διὰ πασέων, used few lines above (1.8.132.7): the singular παντός stresses the ‘wholeness’ of the octave-arrangement (Barker 2005, 92).
- 24 The idea that all parts are biologically necessary for generation is expressed, in an Anaxagorean style (Joly 1960, 31-2), at the core of the embryological section (1.7.130.21): ἀνάγκη δὲ τὰ μέρη εἶναι πάντα τὰ ἐσιόντα. It seems to me that there is a close connection between the idea that the human body is made up of “parts of parts and whole of wholes” (1.6.128.25: ἐσέρπει δὲ ἐς ἄνθρωπον μέρη μερέων, ὅλα ὅλων) and the embryological theory that describes the birth of life as an appropriate mingling of particles, musically defined as an *harmonia* having all the fundamental concords.

‘thoughtless wandering’ is—as described in ch. 6—the impossibility of having the appropriate position within a system of reciprocal relationships.²⁵

By primarily conveying the idea of an organised arrangement of parts, the notion of *harmonia* of *Vict.* 1.8 strongly recalls both the metaphorical and musical sense of attunement, and the original and physical meaning of the fitting together or joining of various elements, providing the author of *On Regimen* with a powerful means of bridging the various fields (physics, cosmology, human life) he is interested in. Whilst *harmonia* in *Vict.* 1.8 seems to carry only a strictly musical sense,²⁶ we should not overlook the key role that this polysemantic concept plays in many Presocratic theories: the idea that reality—the universe, material things...—is based on the harmonization of different, and sometimes opposite, elements, is common among Presocratic philosophers, as well as medical writers. Heraclitus’ fragments provide us with the most interesting example of a philosophical use of the notion of *harmonia* in all its meanings—material, theoretical and musical.²⁷ I suggest that the author of *On Regimen* widely exploits the semantic power of *harmonia*, even when he is strictly speaking of ‘musical’ *harmonia* (*Vict.* 1.8), this being perhaps another feature of his Heraclitean leaning.²⁸ Perhaps it is not implausible to perceive in the description of the failed *harmonia* at 1.8.132.8–9, and in particular in the notions of low-pitched (τὰ βαρέα) and high-pitched elements (ὀξεῖσι) that do not join in any of the three concords, a faint echo of the things moving downwards (κάτω) and upwards (ἄνω) in the Heraclitean sentence at

25 1.6.130.11–5: “They wander without thought (πλανᾶται μὲν γὰρ ἀγνώμονα), but if they combine with one another they realise what they are joining” (transl. Jones, modified). On 1.8.132.6–11, see Bartoš 2015, 151–2.

26 The term occurs only in the ‘musical’ sections: 1.8.132.6–8, 1.18.138.15.

27 See Kahn’s remark on Heraclitus’ fr. 51: “... we expect to find *harmoniē* used in all available senses: as a physical fitting together of parts, as a principle of reconciliation between opponents, and as a pattern of musical attunement” (1979, 197). In a recent article, Sassi (2015) has argued that the musical analogy was fundamental to Heraclitus’ concept of cosmic harmony; she analyses, among other things, passages from *On Regimen*, drawing a very interesting picture of the relationships between early musical theory and Presocratic philosophy.

28 Heraclitus’ influence on *On Regimen* has been argued for by Bernays (1885, 1–36). Diels included *On Regimen* chs. 5–7 and 10–24 among the imitations of Heraclitus, in the first edition of *Die Fragmente der Vorsokratiker* (1903, 85–8). Heraclitus’ presence in *Vict.* 1 has been subsequently limited, see in particular Joly’s (1960, 19, and Joly-Byl 2003, 25–34), who emphasised the Anaxagorean inspiration of the treatise. For a recent reassessment of the question, see Bartoš 2015, 118–27. It seems to me that Bernays’ interpretation still rests on strong evidence.

the beginning of ch. 5.²⁹ The harmony of the embryo is not so different from the cosmic order, characterised by things that move and combine according to their allotted destiny.³⁰

Music and Cookery

[Μουσικῆς ὄργανον ὑπάρξει δεῖ πρῶτον, ἐν ᾧ δηλώσει ἃ βούλεται.] Ἀρμονίης συντάξεις ἐκ τῶν αὐτῶν οὐχ αἱ αὐταί, ἐκ τοῦ ὀξέος καὶ ἐκ τοῦ βαρέος, ὀνόματι μὲν ὁμοίων, φθόγγῳ δὲ οὐχ ὁμοίων. τὰ πλείστον διάφορα μάλιστα συμφέρει, τὰ δὲ ἐλάχιστον διάφορα ἥκιστα συμφέρει. εἰ δὲ ὅμοια πάντα ποιήσῃ τις, οὐκέτι τέρψις. αἱ πλείστα μεταβολαὶ καὶ πολυειδέσταται μάλιστα τέρπουσι. μάγειροι ὅψα σκευάζουσιν ἀνθρώποισι διαφόρων, συμφόρων, παντοδαπὰ συγκρίνοντες, ἐκ τῶν αὐτῶν οὐ ταῦτά, βρώσιν καὶ πόσιν ἀνθρώπων. εἰ δὲ πάντα ὅμοια ποιήσῃ, οὐκ ἔχει τέρψιν· οὐδ' εἰ ἐν τῷ αὐτῷ πάντα συντάξῃεν, οὐκ ἂν ἔχοι ὀρθῶς. κρούεται τὰ κρούματα ἐν μουσικῇ τὰ μὲν ἄνω, τὰ δὲ κάτω. γλῶσσα <v> μουσικῇ μιμεῖται διαγινώσκουσα <v>³¹ μὲν τὸ γλυκὺ καὶ τὸ ὀξύ τῶν προσπιπτόντων, καὶ διάφωνα καὶ σύμφωνα. κρούεται δὲ τοὺς φθόγγους ἄνω καὶ κάτω, καὶ οὔτε τὰ ἄνω κάτω κρουόμενα ὀρθῶς ἔχει οὔτε τὰ κάτω ἄνω. καλῶς δ' ἡρμοσμένης γλῶσσης τῇ συμφωνίᾳ τέρψις, ἀναρμόστου δὲ λύπη.

(*Vict.* 1.18.138.14-26)

[Firstly, there must be a musical instrument, whereby to show what is intended.] From the same components come harmonious compositions that are not the same, from the high and from the low, which are alike in name but not alike in sound. Those that are most diverse make the best harmony; those that are least diverse make the worst. If anyone composed a piece all on one [component], it would fail to please. It

29 On the author's use of ὀξύς/βαρύς as synonyms of ἄνω/κάτω respectively, see the analysis of 1.18 on p. 204 below. On the link between ch. 5 and the following embryological excursus, see Bartoš 2015, 122-3. Interestingly, in the Hippocratic collection another combination of embryology, 'musical' development of the embryo, and Heraclitean style occurs, see *Hp. Alim.* 37 (9.110.16-8 Litttré): Περίοδοι ἐς πολλὰ σύμφωνοι, ἐς ἔμβρυον καὶ ἐς τὴν τούτου τροφήν· αὐτὶς δὲ ἄνω ῥέπει ἐς γάλα καὶ ἐς τροφήν βρέφους.

30 After all, this idea is explicitly presented in ch. 10 (134.5-6), where we are told that fire arranges the embryo as an imitation of the whole (ἀπομίμησιν τοῦ ὅλου), anticipating the notion of mimesis and of microcosm/macrocasm fully explored at chs. 12-24, see below, p. 202. On mimesis in 1.10, see Jouanna 1999, 276-7.

31 γλῶσσα ΘΜ: *corr.* Koller; p. 60 μουσικὴν θ διαγινώσκουσα ΘΜ: *corr.* Koller; *ibid.* See below p. 205 n. 40.

is the greatest changes and the most varied that please the most. Cooks prepare for men dishes of ingredients that disagree while agreeing, mixing together things of all sorts, from things that are the same, things that are not the same, to be food and drink for man. If the cook makes all alike there is no pleasure in them; and it would not be right either if he were to compound all things in one dish. The notes struck while playing music are some high, some low. The tongue resembles music in distinguishing, of the things that touch it, the sweet and the acid, the discordant from the concordant. Its notes are struck high and low, and it is well neither when the high notes are struck low nor when the low are struck high. When the tongue is well in tune the concord pleases, but there is pain when the tongue is out of tune.

(Transl. Bartoš 2015, 153-4, slightly modified)

This passage is included in a long excursus on *technai* and *mimesis* that begins in ch. 12 and ends in ch. 24. At the end of the section (1.24.142.4-5), the author summarises his treatment with the following words: “all the arts have something in common with the nature of man”. This sentence describes the very topic of the excursus: a comparison between *technai* and human nature, based on the idea that there is a sort of ‘communion’ (ἐπικοινωνιώνουσιν) between the arts and human life. It is essential to recognize that this mimetic relationship, being part of the general microcosm/macrocosm theory underlying the treatise, is characterised by circularity: human nature is, at the same time, the object and subject of this imitative process.³² Ch. 18, with its musical analogy, provides an interesting example of this pervasive and circular mimetic process.

The first part of the chapter (138.15-8) is aimed at demonstrating that a fundamental characteristic of the musical art is the combination of extremely different elements. Harmonic arrangements (Ἀρμονίης συντάξεις) are made up of elements that are, at the same time, alike—as both the elements are

32 On the ideas of microcosm and macrocosm in *On Regimen*, see Joly 1960, 37-52, Bartoš 2015, 129-38. On the bidirectional nature of the notion of *mimesis* in the treatise, see Burkert's remarks (1972, 44-5): “One may just as well say that the human body ‘imitates’ the cosmos as that the parts of the cosmos ‘imitate’ human organs. In the same way, either the arts imitate nature or nature imitates the arts. Imitation is a two-sided correspondence, which makes it possible to interpret separate things following the same pattern but without implying differences of rank or a relationship of ontological priority”. Recently, Bartoš (2014, 543-4; 2015, 131-2, 137-8, 154-5) has stressed the importance of this notion of *mimesis* for a correct understanding of the analogies between *technai* and human nature at *Vict.* 1.12-24. See below, p. 205 n. 40.

sound—and different: one is low-pitched, the other high-pitched.³³ The most different things combine better, and produce the best *harmonia*. These are very common considerations in ancient Greek musical writings, as well as in philosophical texts describing various phenomena.³⁴ Furthermore, the idea that musical pleasure derives from the simultaneous presence of different elements, and from variations and changes (μεταβολαί), is widespread in ancient discussions on music.³⁵

I do not wish to dwell here on these first lines but only an important philosophical concept intertwined with the musical notions. It concerns the pair of terms διάφορα/συμφέρει, twice repeated (138.16-7). This pair, which clearly evokes Heraclitean doctrines, was previously mentioned a few lines above, in ch. 17: the *technē* dealt with there is architecture, and we are told that architects create buildings out of different elements (138.9); the chapter ends with a sentence that may well be considered an introduction to the following passage on music: “all these things being diverse are in agreement” (138.13: ταῦτα πάντα διάφορα ἔόντα συμφέρει). Furthermore, at the very beginning of the section on mimesis and *technai*—ch. 11—σύμφορα/διάφορα are employed to assert that “all things are in agreement, though diverse” (134.24-5: καὶ σύμφορα πάντα, διάφορα ἔόντα). The use of διάφορα/συμφέρει at 138.16-7, then, shows an interesting combination of specific musical notions—probably stemming from practice and theory alike—and philosophical theories, whose concepts were particularly appropriate to be exploited in musical analogies (such as the Heraclitean theories, indeed).³⁶

The following section (138.18-21) establishes that things go in quite the same way for cookery: like musicians, cooks prepare dishes that “disagree while agreeing” (διαφύρων, συμφύρων); in this case too, the result is pleasure (τέρψιν). Although the comparison between music and cookery may come across as a

33 Cf. Pl. *Phlb.* 17c1-5: φωνὴ μὲν που καὶ τὸ κατ’ ἐκείνην τὴν τέχνην ἐστὶ μία ἐν αὐτῇ . . . δύο δὲ θῶμεν βαρὺ καὶ ὀξύ . . .

34 The closest parallel is with Aristotle’s account of Heraclitus’ doctrine at *EE* 7.1.1235a27-8 (22 A 22 DK), see esp.: οὐ γὰρ ἂν εἶναι ἁρμονίαν μὴ ὄντος ὀξέος καὶ βαρέος. For an analysis of this fragment in relation to *Vict.* 1.18, see Sassi 2015, 7-8.

35 Ps.-Arist. *Pr.* 19.39. μεταβολαί is a technical term, particularly connected to the vocabulary of the so-called New Music (late fifth century BC). For the link between the remarks on pleasure and variation in *Vict.* 1.18, and the New Music, see West 1992, 371-2; Meriani 2003, 23; Demont 2014, 17, 19.

36 See esp. 22 B 8 DK: τὸ ἀντίξουν συμφέρον καὶ ἐκ τῶν διαφερόντων καλλίστην ἁρμονίαν, and 22 B 10 DK: . . . συμφερόμενον διαφερόμενον . . ., both analysed by Sassi (2015, 4-16), who makes interesting comparisons with *Vict.* 1.8 and 1.18, also specifically on ‘συμφέρον’.

mere literary *topos*, the importance of this reference to cookery for the author's explanatory strategy has rightly been emphasised, since it is essential for introducing a crucial analogy: namely, the comparison between music and the tongue at the end of the chapter.³⁷

At 138.21-6 the author comes back to music: "the notes struck while playing music are some high, some low" (κρούεται τὰ κρούματα ἐν μουσικῇ τὰ μὲν ἄνω, τὰ δὲ κάτω). Even if the sentence is quite clear, and it seems to be an echo of the first sentence (Ἀρμονίης συντάξεις ἐκ τῶν αὐτῶν οὐχ αἱ αὐταὶ, ἐκ τοῦ ὀξέος καὶ ἐκ τοῦ βαρέος, . . .), one important point should not pass unnoticed: the use of ἄνω and κάτω, instead of ὀξύς and βαρύς. As is well-known, pitch is not usually expressed, in ancient Greek writings, in terms of 'up' and 'down', but through the notions of 'sharp' (ὀξύς, high-pitched) and 'heavy' (βαρύς, low-pitched), concepts borrowed from the sensory field of touch.³⁸ Unlike ὀξύς and βαρύς, ἄνω and κάτω are not technical terms in the musical field, being generally associated with physical objects rather than with theoretical topics. It is very difficult to account for this switch of terminology at 138.21-6, and even the possibility that ἄνω/κάτω and ὀξύς/βαρύς are not used as synonyms might be considered. However, I suggest that in this case too a closer look at the author's peculiar combination of musical and philosophical notions can contribute to shed some light on this awkward point. The ἄνω/κάτω pair—like the σύμφορα/διάφορα one—brings particular philosophical notions into the musical analogy of 1.18: ἄνω/κάτω is a recurrent opposition in *Vict.* 1, being frequently used in accounts of cosmic and biological phenomena.³⁹ At the end of 18 the author repeatedly uses ἄνω and κάτω, while drawing a complex comparison between music and tongue: I would suggest that the switch from the standard musical terms, ὀξύς and βαρύς, to less technical terms, such as ἄνω and κάτω, connected to the sphere of material object, serves the purpose of the comparison, by introducing two notions that are midway between music and physics.

37 Demont 2014, 18. On the association between music and cookery, see e.g. Pl. *R.* 404c-e, where food and the regimen characterised by *poikilia* are compared to a musical style rich in *harmoniai* and rhythms; in comedy, see esp. the comic fragment of Damoxenus' *Syntrophoi* (fr. 2 K.-A.), with the analyses of Roselli 2000 and Wilkins 2000, 403-6.

38 Rocconi 2003a, 54-7; 2003b, 390-1. For an occurrence of ἄνω with the meaning of ὀξύς in musical writings, see ps.-Arist. *Pr.* 19.37.920b19.

39 See esp. 1.5.128.12; 1.7.130.26-7.

Where the tongue resembles music is in its function as a taste organ: tongue imitates music when distinguishing between different flavours.⁴⁰ It is worth noting that the perceptive qualities are listed in a *crescendo* of musicality: γλυκὺς is not a specifically musical term, even though it is widely used in ancient descriptions of musical phenomena;⁴¹ ὀξύς is equally used in the field of taste and in the field of music;⁴² finally, with διάφωνα and σύμφωνα we have completely passed into the musical field. This employment of musically nuanced notions is aimed at sustaining the bizarre idea of a ‘musical tongue’, presented in the final part of the chapter.

The next sentence—κρούεται δὲ τοὺς φθόγγους ἄνω καὶ κάτω—by restating what had been said a few lines above regarding music (κρούεται τὰ κρούματα ἐν μουσικῇ τὰ μὲν ἄνω, τὰ δὲ κάτω), stresses the musical character of the gustatory function performed by the tongue, and introduces the image of a tongue ‘well in tune’ (καλῶς δ’ ἡρμοσμένης γλώσσης).⁴³ Although the idea of a ἡρμοσμένη γλώσσα seems to imply that the tongue is considered in this part of the text as the organ of voice rather than the organ of taste, I think that in fact this is by no means the case here: the ἡρμοσμένη γλώσσα is the tongue which distinguishes between different flavours, and its being well attuned is the condition that makes it appropriately perceive flavours and take pleasure from them.⁴⁴ The music of flavours, composed by cooks, requires to meet a musical tongue,

40 At 138.22-3 I read, with Demont (2004, 62 and 2014) and Bartoš (2015, 154-5), γλώσσα μουσικὴν μιμεῖται διαγινώσκουσα... (MSS reading), which was considered corrupt by Joly, who changed the text to: γλώσσα<v> μουσικῇ μιμεῖται διαγινώσκουσα<v>... (see also Koller 1954, 60). As Bartoš (2014, 543-4; 2015, 131-2, 137-8, 154-5) has convincingly argued, the puzzling idea of a *technē* (music) imitated by human nature (the tongue) is perfectly intelligible within the overall context of the section on *technai* and *mimesis*, and the bidirectional concept of *mimesis* that characterises it. ‘Life imitates art far more than art imitates life’, we might say, borrowing Oscar Wilde’s words.

41 Rocconi 2003a, 79 and n. 483.

42 On the exploitation of the polysemy of ὀξύς in *On Regimen*, Byl 2002, 220.

43 The tongue plays sounds (κρούεται δὲ τοὺς φθόγγους) in a metaphorical sense, where sounds are flavours, see p. 206 below. Alternatively, accepting the correction made by Bywater, who brackets τοὺς φθόγγους, the subject of κρούεται may be τὰ προσπίπτοντα from the previous sentence, i.e. the things that touch the tongue. As for the notion of ἡρμοσμένη γλώσσα, it seems to me that it contributes to the idea that the point made by the author here is that the tongue imitates music, not *vice versa*.

44 Cf. 1.23.140.21, where the tongue is again mentioned as an organ of taste (its function is to perceive pleasant and unpleasant things), while the phonic function is attributed to the mouth (γλώσσα ἡδονῆς καὶ ἀηδίας, στόμα διαλέκτου). The hypothesis that in 1.18.138.25 *glossa* is the organ of voice is alluded to by Joly-Byl 2003, 247.

in order to give pleasure. Hence, the analogy between *technai* and human nature in ch. 18 hinges on the notion of harmonic arrangement that opens the chapter: as music and cookery harmonize opposites elements in order to produce pleasure, the tongue must be essentially harmonized in order to perceive pleasure. From this perspective, the tongue can be compared to a musical instrument:⁴⁵ just as a kithara, say, will not produce concords, let alone pleasure, if it is not attuned, a non-attuned tongue cannot perceive (in a subjective sense, produce) flavours and their concord.⁴⁶ *Harmonia*, which is essential for life (1.8), is also what makes the vital function of nutrition a source of pleasure.

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45 This comparison has been suggested by Demont (2014, already in 2004, 62–3) within an overall interpretation of *Vict.* 1.18. Focusing on the polysemy of the term *glossa*, and the use that the author of *On Regimen* makes of it, Demont (2014) gives a brilliant interpretation of the puzzling comparisons proposed in ch. 18, arguing that *glossa* has two different meanings in the passage: while in 138.21–4 it means the tongue, in 138.24–5 it signifies the reed of an *aulos*, hence the comparison in this part of the chapter is between two *organa*, the tongue and the reed. Although Demont's interpretation is intriguing, I am not fully convinced that *glossa* in the last part of ch. 18 is used to indicate something other than the organ of taste.

46 On the hypothesis that flavours are like notes in the analogy, see Demont 2004, 63.

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The Apotropaic Function of Music Inside the Sanctuaries of Asklepios

Ritual Soundscape and Votive Offerings

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Abstract

Music obviously played a strong role in ancient Greek ways of healing the human body. However, although scholars have studied some aspects, there still is no comprehensive enquiry on the relationships between music and sounds in Asclepios' sanctuaries. The purpose of this paper is first to combine all the sources on the soundscape of famous and minor sanctuaries, and secondly to give some new perspectives on the specificity of Asclepian soundscapes. Is there any relationship between environmental sounds, anthropic sounds and cultic music, especially paeans? We may find some clues in the texts related to the cult of Asclepios but also in the archaeological evidence, because some votive offerings have been unearthed, like votive ears and musical instruments. By examining the soundscape of Asclepian sanctuaries, I would like eventually to ask especially whether the link between the musical performances and sounds could be understood as apotropaic.

Keywords

Asklepios – soundscape – votive offerings – music instruments – paian

Asklepios is a strange god. With Dionysos he is one of the very few gods who died once. Asklepios was killed by Zeus for his medicine skills he used for resurrections¹ and is said to have his tomb beneath the famous *tholos* of

1 Graves 1955, n° 50.

Epidaurus,² where the most impressive theatre in the Greek antiquity has been built and preserved.³ The link between Asklepios and theatre, and more generally between Asklepios and music, is often interpreted as the beginning of music therapy, especially regarding the use of music in Pythagorean medicine.⁴ In this paper, I would like to explore another possibility to explain the relationships between medicine and music in the cult of Asklepios, by using the notion of soundscape⁵ and enlarging the enquiry from music to sound more generally. Then I would like to address this topic in the point of view of cultural anthropology,⁶ in that human beings belong to a natural and a social milieu where sounds play a big role. The question is how the ancient Greek body perceives sounds and how the ancient Greek mind conceives them. The way ancient Greeks practice medicine to heal bodies may be explored by considering the sonorous environment of the ancient hospitals, i.e. the sanctuaries of Asklepios. My purpose is to enlighten the importance of sounds in the ritual by giving first some clues on the specificities of the soundscape of Asklepios' sanctuaries. Then I will compare those results with votive offerings related to sound. Finally, the comparison of all of these sources lets us draw some conclusions of the apotropaic function of music and sound in the cult of Asklepios to heal bodies.

The Soundscape of Asklepieia

Asklepios was born in Thessaly and he was considered as one of the most important heroes of this land. Yet the cult of Asklepios is widely spread in Greece and many Asklepieia have been unearthed in the Greek world.⁷ Nevertheless, some sanctuaries were bigger and more famous than others were. We do not have remains of the sanctuary of Trikke in Thessalia, where according to the main legends Asklepios was born. Nevertheless, the greatest sanctuaries have been carefully studied: Epidaurus, Athens, Corinth, Messene and Kos. Therefore, these are the cases I will deal with particularly in this paper.

2 Kabbadias 1891.

3 Gerkan – Müller-Wiener 1961; Moretti 2001, 160-163; Gogos 2011.

4 Gorman, 158-159.

5 For a scientific definition of the ancient soundscape, see Vincent 2015; for an application to the ancient Greek world, see Perrot 2015.

6 Herkovits 1967.

7 For a complete survey, see Edelstein – Edelstein 1998, chapter VII.

People visiting sanctuaries of Asklepios discover a particular landscape. First, it is worth noticing that most of these sanctuaries are located close to a theatre.⁸ Everyone knows the impressive theatre of Epidauros, which is a bit distant from the sanctuary, maybe because of the topographical situation. Whereas the Asklepieion of Athens has been built on the south slope of the Acropolis, close to the theatre of Dionysos,⁹ the one of Corinth¹⁰ is a bit far from the theatre. In Pergamon,¹¹ a big theatre was erected on the North-eastern corner of the place where the circular temple to Asklepios and Zeus stood. The biggest sanctuary to Asklepios, in Kos, was organized in three impressive terraces, without any theatre.¹² Therefore, the presence of a theatre may be explained by the topographical configuration of the sites.

The main urban Asklepieion was in Messene¹³ (Arcadia), inside the *agora*.¹⁴ On the East side, a small theatre (the so-called *ecclesiasterion*) has been built, probably for political meetings. There was also a bigger theatre close to the agora and a very impressive stadium in the south. Since Asklepios was the main god of Messene, he was probably honoured as the ancestor of Messenian kings, as far as Greeks used to bury heroes in the centre of the *agora*.

Another common feature is the presence of springs. In Athens e.g. there are two places, which are related to spring water: the most ancient one, at the West, is made in a tetragonal shape, whereas the most recent one was carved in the rock, behind the Northern *stoa* of the sanctuary, in a circular shape. It is identified as the *ἱερὰ κρήνη*. In Pergamon, there is the most abundant supply of water, with latrines, baths, springs, cisterns and water channels. Finally, a specific feature of those sanctuaries is the presence of porticoes that were used as incubation rooms, e.g. in Epidauros and Athens, with sound reverberation.

This small survey shows how much the natural environment was relevant to install a sanctuary to Asklepios. The presence of a hill was useful to erect a theatre on the slope and the rock can reverberate sounds due to the echo. It is also a good opportunity to find spring water. Indeed, a common feature for Asklepieia, maybe the most important one, is the presence of springs and

8 On the Roman performance places in the Asklepieia, see Melfi 2010, 319-327.

9 Aleshire 1989.

10 Roebuck 1951, 152-159; *Cure and Cult*.

11 Ziegenhaus – Luca 1968; Ziegenhaus 1975 and 1981; Luca 1984; Hoffmann – Luca 2011.

12 Μπισκάνης 2014.

13 Pausanias, *Description of the Greece*, IV, 31, 10.

14 Orlandos 1970; Themelis 1971-1994; Sineux 1997; Μπίρταχας 2008.

fresh water, which make sounds that constitute the basis of the soundscape.¹⁵ Pausanias underlined this aspect of Asklepieia by visiting the one of Pellene:

Ἀπωτέρω δὲ οὐ πολὺ ἀπὸ τοῦ Μυσαίου ἱερὸν ἐστὶν Ἀσκληπιοῦ καλούμενον Κύρος, καὶ ἰάματα ἀνθρώποις παρὰ τοῦ θεοῦ γίνεται. Ὑδωρ δὲ καὶ ἐνταῦθα ἀνέδην ἐστί, καὶ ἐπὶ τῇ μεγίστῃ τῶν πηγῶν τοῦ Ἀσκληπιοῦ τὸ ἄγαλμα ἴδρυται.

[At Pellene, Akhaia], not much further off the Mysaion, is a sanctuary of Asklepios, called Kyros, where the god effects cures of patients. Here too there is a copious supply of water, and at the larges of the springs stands the image of Asklepios.

The supply of water is crucial in healing places, to prepare medicines and cures, to take ritual baths and more generally for hygienic reasons. Indeed, Vitruvius, in its *On Architecture*,¹⁶ writes:

Naturalis autem decor sic erit, si primum omnibus templis saluberrimae regiones, aquarumque fontes in is locis idonei eligentur, in quibus fana constituentur; deinde maxime Aesculapio, Saluti, et eorum deorum, quorum plurimi medicinis aegri curari videntur. Quum enim ex pestilenti in salubrem locum corpora aegra translata fuerint, et e fontibus salubribus aquarum usus subministrabuntur, celerius convalescent.

The natural setting will be like that, if for all temples the healthiest regions and suitable springs of water are chosen first in the places where sanctuaries should be built; and particularly for Asclepius, Hygieia and those gods by whose medical art very many of the sick seem to be cured. For when sick bodies are transferred from a pestilent to a healthy spot and are treated with water from wholesome fountains, they will recover more quickly.

As we have seen, the springs are present but they are not always associated with stone buildings. It depends on places: in Athens, the sacred spring was estimated so important that two different buildings have been built through times. In Pergamon, many buildings related to water were erected. Nevertheless, it is mostly just a natural spring. It has a direct influence on the sounds: canalizing

¹⁵ Pausanias, *Description of the Greece*, 7, 27, 11.

¹⁶ Vitruvius, *De architectura*, 1, 2, 7.

water makes it more hearable. Furthermore, sick people had to take baths in the water, so that the soundscape was also made of bodies moving in the water.

For instance, the ritual bath of the cure is described in Aristophanes' *Plutus*. When the god Plutus lost the sight, the only way to heal him was to send him to the sanctuary of Asklepios in Epidaurus. This is the famous argument of Aristophanes' last piece. When Cario comes back successfully from Epidaurus, he delivers a speech on the strange night he had spent with Plutus in the abaton of the sanctuary, where incubation rites for healing were taking place. This narrative is introduced and closed with traditional invocations to the god Asklepios. Cario makes a report on what is really going on inside the incubation room during the night. In these verses, we find some sound notations.¹⁷

{KA.} Εἷς μὲν γε Νεοκλείδης, ὅς ἐστι μὲν τυφλός,
κλέπτων δὲ τοὺς βλέποντας ὑπερηκόντικεν·
ἕτεροί τε πολλοὶ παντοδαπὰ νοσήματα
ἔχοντες. Ὡς δὲ τοὺς λύχνους ἀποσβέσας
ἡμῖν παρήγγειλεν καθεύδειν τοῦ θεοῦ
ὁ πρόπολος. εἰπὼν, ἣν τις αἰσθῆται ψόφου,
σιγᾶν, ἅπαντες κοσμίως κατεκείμεθα.
Κἀγὼ καθεύδειν οὐκ ἐδυνάμην, (...)
Τὸ γράδιον δ' ὥς ᾗσθητο δὴ μου τὸν ψόφον,
τὴν χεῖρ' ὑπῆρε· κᾶτα συρίζας ἐγὼ
ὁδᾶξ ἐλαβόμην ὡς παρείας ὦν ὄφεις. (...)
{ΓΥ.} Ὁ δὲ θεὸς ὑμῖν οὐ προσήειν;
{KA.} Οὐδέπεω.
Μετὰ τοῦτο δ' ᾗδη καὶ γέλοιον δῆτά τι
ἐπόησα. Προσιόντος γὰρ αὐτοῦ μέγα πάνυ
ἀπέπαρδον· ἡ γαστήρ γὰρ ἐπεφύσητό μου.

Cario: Yes. Firstly, Neoklides, who is blind, but steals much better than those who see clearly; then many others attacked by complaints of all kinds. The lights were put out and the priest enjoined us to sleep, **especially recommending us to keep silent should we hear any noise**. There we were all lying down quite quietly. I could not sleep (...) **On hearing the noise I made, the old woman put out her hand, but I hissed and bit it, just as a sacred serpent might have done.** (...)

Wife: And did not the god come?

17 Aristophanes, *Plutus*, 665-699.

Cario: He did not tarry; and when he was near us, oh! dear! such a good joke happened. My belly was quite blown up, and I let a very big fart!

Cario is evoking quickly the soundscape of the incubation room: since there are plenty of sick people, they lament and complain. The priest asks the sick to have rest and to sleep, of course because of the ritual: healing is only possible in the sleep. Therefore, he wants a complete silence, even if a noise is perceptible. Indeed, the incubation rites take place in the night,¹⁸ which is more sonorous than the day according to Plutarchus in his *Quaestiones Convivales*.¹⁹ Of course, there is a comic point: the priest does not want to be seen stealing meal offerings . . . However, we have to remember that this was the specific soundscape of the incubation room. Silence obviously played a significant role. As we have seen, we must keep in mind that the visitors are suffering people, so we may expect cries and other noises related to diseases, as Cario reports later:²⁰

{KA.} (...) 'Ο δὲ κεκραγῶς καὶ βοῶν
 ἔφευγ' ἀνᾶξας· (...)
 εἶθ' ὁ θεὸς ἐπόππυσεν.
 Ἐξηξάτην οὖν δύο δράκοντ' ἐκ τοῦ νεῶ
 ὑπερφυεῖ τὸ μέγεθος.
 {ΓΥ.} Ὡ φίλοι θεοί.
 {KA.} (...) ἐγὼ δὲ τῷ χεῖρ' ἀνεκρότησ' ὑφ' ἡδονῆς
 τὸν δεσπότην τ' ἡγειρον. Ὁ θεὸς δ' εὐθέως
 ἠφάνισεν αὐτὸν οἷ τ' ὄφεις εἰς τὸν νεῶν.

Kario: (...) **Neoklides shrieked, howled**, sprang towards the foot of his bed and wanted to bolt (...) **while the god whistled**, and two enormous snakes came rushing from the sanctuary.

Wife: Great gods!

Kario: (...) **I clapped my hands with joy and awoke my master**, and the god immediately disappeared with the serpents into the sanctuary.

Of course, Aristophanes plays with these circumstances and Cario talks about a noise he produced himself, a thunderous fart. Since the ritual of incubation supposes an epiphany of the god Asklepios himself, we also should expect terrified voices: in the story of Cario, a sick man called Neoklides shrieks

18 Sineux 2007.

19 Plutarchus, *Quaestiones Convivales*, 720c-722f.

20 Aristophanes, *Plutus*, 714-741.

and howls because the salve he gets into his eyes is made of vinegar and garlic... Asklepios is a sadic god according to Aristophanes. Finally, when the healing process is complete, patients may express loudly their joy: Cario e.g. claps his hands. These are human sounds, but in the sanctuaries of Asklepios, there also are peculiar sounds of animals. By describing the activities of Asklepios, he says he whistled so that two enormous snakes came rushing from the sanctuary. Therefore, it is a supernatural sound coming from the god. The term Cario uses is ποππυσμός,²¹ which is a clap made by the tongue. Indeed, Asklepios enjoys a certain category of animals. Of course the snake is the best known and it seems that there are possible archaeological proofs of pits where snakes lived in the sanctuaries, e.g. in Corinth. So the animal soundscape of the Asklepieia is based on the hissing of the snakes: in the first excerpt, Cario explains he hisses like a sacred snake.

The affinities between Asklepios and snakes should be explained in terms of chthonian cult. There are two other animals related to the god of medicine: the dog and the cockerel. At the end of *Phaedo*, Socrates reminds they owe a cockerel to Asklepios.²² These are particularly sonorous animals, whose cries are heard during the night.²³ The dog is also the favourite animal of Hekate, the goddess of magic. Therefore, it is sometimes a kind of messenger of gods, whose barking is to be interpreted as a signifying signal. There is an interesting story with a dog in the sanctuary of Asklepios in Athens: this is one of many narratives about animals expressing the will of the gods:²⁴

ἐς Ἀσκληπιοῦ παρήλθε θεοσύλης τό τε μεσαίτατον τῆς νυκτὸς παραφυλάξας καὶ τῶν καθευδόντων τὸν βαθύτατον ὕπνον ἐπιτηρήσας, εἶτα ὑφείλετο τῶν ἀναθημάτων πολλά, καὶ ὥς γε ᾤετο ἐλελήθει. ἦν δὲ ἄρα σκοπὸς ἀγαθὸς ἔνδον κύων καὶ τῶν ζακώρων ἀμείνων ἐς ἀγρυπνίαν, ὅσπερ οὖν εἶπετό οἱ διώκων, καὶ ὑλακτῶν οὐκ ἀνίει, ἥπερ οὖν ἔσθενε δυνάμει τὸ πραχθὲν μαρτυρόμενος. τὰ μὲν οὖν πρῶτα ἔβαλλεν αὐτὸν λίθοις αὐτός τε καὶ οἱ τῆς κακῆς ἐκείνης πράξεως κοινωνοί, τὰ δὲ τελευταῖα προύσειεν ἄρτους τε καὶ μάζας. ἐπήγετο δὲ ἄρα ταῦτα δέλεαρ κυνῶν προμηθῶς, ὥς γε ὑπελάμβανεν. ἐπεὶ δὲ καὶ παρελθόντος ἐς τὴν οἰκίαν οὐ κατήγετο ὑλάσκει καὶ πάλιν προϊόντος, ἐγνώσθη μὲν ὁ κύων ἔνθεν ἦν, τὰ λείποντα δὲ τῶν ἀναθημάτων ἐπόθουν αἱ γραφαὶ τε καὶ αἱ χῶραι ἔνθα ἀνέκειντο.

21 Perrot 2012a.

22 Plato, *Phaedo*, 118a.

23 See Perrot forthcoming.

24 Aelian, *On Animals*, 7, 13. The same is reported by Plutarchus, *De sollertia animalium*, 969e.

A temple-thief who had waited for the midmost hour of night, and had watched till men were deep asleep, came to the shrine of Asklepios [in Athens] and stole a number of offerings without, as he supposed, being seen. There was however in the temple an excellent watcher, a dog, more awake than the attendants, and it gave chase to the thief and **never stopped barking**, as with all its might it summoned others to witness what had been done. And so at first the thief and his companions in that crime pelted the dog with stones; finally he dangled bread and cakes in front of it. He had been careful to bring these things with him as an attraction to dogs, as he supposed. Since however **the dog continued to bark** when the thief came to the house where he lodged and when he came out again, it was discovered where the dog belonged, while the inscriptions and the places where the offerings were set up lacked the missing objects.

According to Aelian, dogs used to be watchers in the shrines to prevent them from plundering. They bark to alert, when the goods of the gods are in danger. That is why this dog was granted the best award Athenian people could give to remarkable citizens: to feed them with public money. Its role is very important in the night, like the cockerel, which is well known for crying in the middle of the night: it awakes people so that they can go to work. In the sanctuary of Asklepios, when the cockerel sings, it means that the ritual of incubation is achieved because sun is rising up.

We may wonder whether the cries of such animals play a role in the therapy. First, it is obvious that these three animals have a cry clearly identified in the written sources: *συριγμός*,²⁵ *ύλαγμός*, *άλεκτροφωνία*.²⁶ Secondly, this cry has something to do with chthonian cults: these are dark cries, associated with night, danger and even death. Therefore, as someone visited a sanctuary of Asklepios, he could hear many sounds and the ear was particularly active.

Votive Offerings

In order to better understand the soundscape of the sanctuaries of Asklepios, we have to consider now the votive offerings related to hearing. Since all diseases are cured, we may expect that patients may suffer from ears. Indeed, thanks to inscriptions found in Epidaurus, usually called *ιάματα*, we are told

25 Perrot 2012a, with emphasis on the Pythian *nomos* and the *polykephalos nomos*.

26 Perrot forthcoming.

about narratives of healing. There are very few cases concerning problems of audition. No one seems to suffer from ears except one case of cancerous lesion.²⁷ Problems are rather related to the tongue, in cases of mutism or aphony. There is a case of a παῖς ἄφωνος, but we don't learn anything about the cure.²⁸ We may take here two other examples, which are particularly interesting in the articulation between landscape and soundscape. The first one is an Epidaurean ἵαμα, where a young girl who lost her voice recovers it by seeing a snake: she is so afraid that she suddenly shouts:²⁹

(XLIV) κόρα ἄφωνος· α[ὕτ]α [ἐγκαθεύδουσα ὡς εἶδε ἐρχόμενον δρ]άκο[ν]τα ἀπὸ δενδρέου τινὸς τῶν κατὰ τὸ ἄ[βατον(?)] ἐόντων, ἐξεγερθεῖσα ἐ[ὕ]θυς βοήι, τὰμ ματέρα καὶ τὸμ πατέρα κα[λ]έ[ουσα, ἀπήλ]θε [δὲ ὑγίης]. *vac.*

A girl without voice: she was sleeping when she saw a snake coming to her from one of the trees that are in the abaton, she suddenly woke up and shout, calling her mother and her father. She left healthy.

The snake is not told to hiss, but we see here how animals living in the shrines may be related to the human voice. The second example is an excerpt from the speech Aelius Aristides wrote about the sanctuary of Asklepios in Pergamon:³⁰

ἦδη δέ τις πίων ἐξ ἀφώνου φωνὴν ἀφήκεν, ὥσπερ οἱ τῶν ἀπορρήτων ὑδάτων πiónτες μαντικοὶ γιγνόμενοι.

If someone drinks, he recovers his voice after having been voiceless, like people who drink ineffable waters become soothsayers.

The water supplied inside the sanctuary makes mute people speak again: for many Greek poets, water itself speaks. Then in case one wants to be cured because he suffers from a problem of speaking, the main elements of the Asklepiian landscape, water and animals, may give the *pharmakon*.

If we compare with clay offerings representing parts of the human body, ears are not the most numerous but they are well attested in Corinth e.g.³¹

27 Prêtre – Charlier 2009, n° 23.

28 [οὗτος ἀφί]κετο εἰς τὸ ἱερὸν ὑπὲρ φωνᾶς: IG IV², 1.121, l. 41-48. See Prêtre – Charlier 2009, n° 1.

29 IG IV², 1.123, l. 1-3; there seems to be another case of ἀφωνία in the lines 48-50, very badly preserved. See Prêtre – Charlier 2009, n° 3.

30 Aelius Aristides, Εἰς τὸ φρέαρ τοῦ Ἀσκληπίου, 255.

31 Robuck 1951, 120; *Cure and Cult*, 10; *Ιάσις* 220-221 (see also 223).

Does it mean that ears are offered when ears have been cured? These offerings are supposed to be attached to a wall, as shown by the holes in the terracotta plaques. Thanks to inscriptions, we may suppose that the wall was what these inscriptions call the ἀκοαί, but there is no remain at all.³²

εἰς ὕδωρ ἀποβρέξαι, πρὸς ταῖς ἀκοαῖς ἐν βαλανείῳ προστρίβεσθαι τῷ τοίχῳ

Have a bath in the water, rub against the wall close to the *akoai* in the bathroom

We do not have any other clue about these ἀκοαί. The question is if it was a wall specifically designed for exhibiting votive ears and related to audition diseases or a place made for praying the god. Indeed, we cannot be sure that all the votive ears are made for healing. It is probably the case for the ones coming from Corinth, because one of those ear pairs seems to be represented with teeth: if there are two parts of the body depicted, we may expect the medical problem concerns hearing and speaking. Yet there are many examples of votive ears that are not associated with medicine, especially in Delos:³³ we have dedications to Aphrodite (Ζωῆς εὐχὴν Ἀφροδίτῃ; Ἀριστοκράτης Ἀφροδίτῃ Πεισιτίχῃ; Βότρυς Μαίχρεις(?) Ἀφροδίτῃ εὐχὴν)³⁴ or to Isis (Διογένης/Διογένου Ἀντιόχεος Ἰσιδι ἐπιχόωι εὐχὴν).³⁵ Votive ears are dedicated to help the god hear the supplications. However, the calm soundscape of Asklepieia, with springs, is another feature serving the same purpose: it is important that calm reigns so that gods may pay attention to mortals.

Ears are not the only thing related to audition dedicated to the god Asklepios. Sound instruments have namely been offered to the god and this ritual may help us understand the kind of sounds that the god enjoyed. These are not melodic sounds, since the two only examples we have at our disposal are percussion instruments: a cymbal and a *krotalon*. The cymbal was discovered in Epidaurus.³⁶ It has a dedicatory inscription:

Τῷ Ἀσκληπίῳ ἀνέθηκε Μίκυλος

Mikylos dedicated [me] to Asklepios

32 IG IV², 1.126, l. 9-10.

33 Deonna 1938, 219-220.

34 ID 2395, 2397 and 2394.

35 ID 2173. See Ιάσις 221-222.

36 Kabbadias 1891, n° 8; Rouse 1902, 251, n° 1; Jeffery 1990: 182 n° 10; Perrot 2012b.

Unfortunately, we do not know anything about this man. However, there is an interesting coincidence: in his dialog *The cock*,³⁷ Lucian puts on stage a dialog between the cock and its master whose name is Mikyllos. Is there any link between this name and the cock?

The krotalon is only known by an inscription, which is the inventory of the Asklepieion of Athens.³⁸ Among many offerings, a *krotalon* has been dedicated to the god, but we do not know for certain who dedicated it.

Two examples are very few to draw firm conclusions. Yet we may observe that both are percussion instruments that usually have an apotropaic function. The sound of such items is supposed to frighten devils and bad spirits, because doctors were supposed to fight against illness caused by deities. It is not surprising in a healing cult. However, there is a contrast between the *locus amoenus* designed in the sanctuary and the percussion instruments that produce noise. Nevertheless, this is a modern point of view: since the noise made by the cymbal and the *krotalon* has a positive effect, it may be considered as something good. It frightens evil, like Herakles used *krotala* to fight against the birds of Stymphalon.³⁹

Sound and Music: The Paeon

This interaction between calm landscape and apotropaic sounds helps us explore the signification of music in the cult of Asklepios. We do know first that contests were organized for Asklepios with a musical part,⁴⁰ as shown by the theatres. It is also well known that Asklepios is worshipped with hymns, e.g. in Pergamon:⁴¹

Μαχάονα δὲ ὑπὸ Εὐρύπυλου τοῦ Τηλέφου τελευτήσαι φησιν ὁ τὰ ἔπη ποιήσας, τὴν μικρὰν Ἰλιάδα. Διὸ καὶ τάδε αὐτὸς οἶδα περὶ τὸ Ἀσκληπιεῖον τὸ ἐν Περγάμῳ γινόμενα. Ἀρχονται μὲν ἀπὸ Τηλέφου τῶν ὕμνων, προσάδουσι δὲ οὐδὲν ἔς τὸν Εὐρύπυλον, οὐδὲ ἀρχὴν ἐν τῷ ναῷ θέλουσιν ὀνομάζειν αὐτόν, οἳ ἐπιστάμενοι φοιρῶντα ὄντα Μαχάονος.

37 Lucian, *The Dream or The cock*.

38 IG II² 1534, l. 200.

39 See e.g. [Apollodorus], *Library*, II, 5.

40 Sève 1993. See also IG XII 4, 453-454 in Kos.

41 Pausanias, *Description of the Greece*, 3, 24, 10.

The author of the epic poem *The Little Iliad* says that Makhaon was killed by Eurypylos, son of Telephos. I myself know that to be the reason of the practice at the temple of Asklepios at Pergamon, where they begin their hymns with Telephos but make no reference to Eurypylos, or care to mention his name in the temple at all, as they know that he was the slayer of Makhaon.

But the main musical medium is the paeon,⁴² like for his father Apollo:⁴³

Ἀσκληπιὸς δέ, οἶμαι, οὗτος ἐγγὺς παιᾶνα που παρεγγυὼν γράφειν καὶ κλυτομήτης οὐκ ἀπαξιῶν παρὰ σοῦ ἀκοῦσαι βλέμμα τε αὐτοῦ πρὸς σέ φαιδρότητι μεμιγμένον τὰς [παρὰ] μικρὸν ὕστερον ἐπιξενώσεις αἰνίττεται.

This is Asklepios nearby, I think, doubtless urging you to write a paian, and though 'famed for his skill' he does not disdain to listen to you; and his gaze that is fixed upon you, suffused as it is with joy, dimly foreshadows his visit to you a little later as your guest.

Sophocles composed a paian to Asclepius that was renowned in Antiquity:⁴⁴

Οἱ δὲ ἦδον ᾠδὴν, ὁποῖος ὁ παιᾶν ὁ τοῦ Σοφοκλέους, ὃν Ἀθήνησι τῷ Ἀσκληπιῷ ᾄδουσιν.

The *paian* of Sophokles which they sing at Athens in honour of Asklepios

The main god honoured with *paeans* is Apollo, but Asklepios is the second one, as attested by Aelius Aristides, who says he gave a paeon to both Herakles and Asklepios⁴⁵ and was asked by the god to teach choruses.⁴⁶ This is also to be seen in the conserved paeans, mainly on engraved stones. The most famous is the paeon Isyllos composed for the god Epidaurus and we see how the paeon may have a strong political signification: Isyllos' goal is clearly to show that

42 Edelstein – Edelstein 1998, T. 587-607.

43 Philostratus the Younger, *Imagines*, 13, 885.

44 Philostratus, *Life of Apollonius of Tyana*, 3, 17.

45 Aelius Aristides, *Sacred Tales*, IV, 331: 'Ἦ παιᾶν Ἡρακλῆς Ἀσκληπιέ. καὶ οὕτω δὴ τὸν παιᾶνα ἀπέδωκα ἀμφοτέροις τοῖς θεοῖς κοινόν.

46 Aelius Aristides, *Sacred Tales*, IV, 331. The whole passage (IV, 331-333) deserves a whole article. See for an overview Israelovich 2012, 166-171.

Asklepios is of Epidaurian origin, because his mother was from Epidaurus and because he was born in Epidaurus. Here is the introducing decree:⁴⁷

Ἴσυλλος Ἀστυλάϊδαι ἐπέθηκε μαντεύσασθαι οἱ
περὶ τοῦ παιᾶνος ἐν Δελφοῖς, ὃν ἐπόησε εἰς τὸν Ἀπόλ-
λωνα καὶ τὸν Ἀσκληπιόν, ἧ λῳίόν οἱ κα εἶη ἀγγρά-
φοντι τὸν παιᾶνα. ἐμάντευσε λῳίόν οἱ κα εἶμεν ἀγ-
γράφοντι καὶ αὐτίκα καὶ εἰς τὸν ὕστερον χρόνον.

vacat

ἱεπαιᾶνα θεὸν ἀείσατε λαοί,

Isyllos commissioned Astylaidas to consult the oracle in Delphi about the paian which he had composed for Apollo and Asklepios, whether it would be beneficial for him to inscribe the paian. The oracle responded that it would be beneficial both immediately and afterwards for him to inscribe (it).

People, praise Paian the Lord in song.

This is not the main legend according to which the god comes from Thessaly, the land of magic. Another paeon, found in Erythrea,⁴⁸ lets us draw similar conclusions. Three copies of this text at least were made and have been unearthed in Ptolemais Hermou,⁴⁹ in Athens⁵⁰ and in Dion of Macedonia.⁵¹ There are very few differences, but each text is adapted to its finding context. People change lyrics to suit their local myths or political habits. This has been well studied by scholars.⁵²

What I want to discuss here is not the contents, rather the practice of music in Epidaurus, especially how music and sound interact with one another. The sanctuary of Epidaurus was full of hymns and paeans. Another hymn was composed for Asklepios and inscribed on a wall in the sanctuary, but the inscription is too much damaged to know where it comes from. It is an extremely

47 IG IV², 1.128, l. 32-37. See Furley – Bremmer 2001, 180-192 and 227-240; Sineux 2009; Piguet 2012; LeVen 2014, 317-328.

48 *Erythrai* 1, l. 56-61. See Furley – Bremmer 2001, 161-167.

49 *IGR* 1, 5, 1154, b 1-4.

50 IG II² 4509. See also SEG 28:225, face B right 8-10: καὶ οἱ [πρέσβεις τοῦ ἐν ἄστει Ἀσκληπιείου] / ἀνέγ[ραψαν τὸν εἰς Κορωνίδα καὶ Ἀ]σκληπιῖν / π[αιᾶνα καὶ το]ῦς παιανιστάς. / *vac.*

51 Oikonomos, *Epigraphai* 4, I, 1-5.

52 Vamvouri Ruffly 2013, I 2, II 5 and III 8.

interesting item because it was interpreted as a musical score.⁵³ However, it does not look like other pieces with musical notation, like the Delphian paeans, because the musical letters are not placed above each vowel. There is at the very beginning a line with some letters that could have noted music; the text of the hymn, badly preserved, follows. According to West and Pöhlmann, each line of the hymn, written in dactylic hexameters, should have been sung with this specific series of notes, like a kind of litany, repeating always the same melody. According to them, the piece was written in chromatic Hyperionian, but they explain they had to change two signs:

]ΕΝ Ἀ Ζ Θ Ε Ἀ ΕΝΔΟ[

They also think that the Λ is a sign for pause (λείμμα). S. Bonefas had suggested another way of reading, which authors had not kept. He thought there was a *metabole* by tone and by system:

]ΕΝ Ἀ Ζ Θ Γ= Ἀ ΕΝ ΑΟ[ΙΔΗ

He added that this was not the melody of each verse but a kind of introduction to the whole piece. The problem is that he cannot explain the signs Γ=. While keeping in mind the idea of a *metabole*, I would suggest a new interpretation:

]ΕΝ Ἀ Ζ Θ Ε Ἀ ΕΝΑΡ[ΜΟΝΙΑ

Indeed, it is not impossible to read on the stone at the end of the preserved line a P. It would be the indication of the genre, that is enharmonic (ἐν ἁρμονίᾳ), rather than chromatic. Furthermore, the Λ may be considered as a musical note, which leads to the following musical reconstruction. A and Z belong to the Hyperionian, where they respectively are the *paramese* and the *mese*. A first *metabole* of *tropos* could happen thanks to the Z, which is the *paramese* of the Lydian: the Θ is the trite of the disjunctive tetrachord and the E the trite of the conjunct tetrachord, and then we have a *metabole* of system. Finally, a second *metabole* of *tropos* is possible with the Phrygian: the Θ is the trite of the disjunctive tetrachord and the Λ is the trite of the conjunct tetrachord. If this hypothesis were correct, the *metabolai* would happen through the *tritai*. The two first letters EN could be read as ἐν, which would mean “in the following notes”. My idea is that the singers were free to use these notes, as they wanted, but only these notes, like a jazz grid. If we transcribe the signs into our modern

53 SEG 30, 390. See Solomon 1985; Bonefas 1989; Pöhlmann – West 2001, n° 19.

system, in the chromatic genre, we get the following notes, ranged from low to high: c# – d# – e – f – f# (Λ Θ Ζ Ε Α). Then the notes on the inscription are ordered according to the tropes and not the melody.

This is a valuable testimony on the music performed for the god Asklepios. Nevertheless, it seems interesting to investigate the way other gods are worshipped in Epidaurus, because we have at our disposal a few inscribed hymns dedicated to all the gods, to Hygieia (daughter of Asklepios and goddess of health), to Pan and to the Mother of Gods. Let us consider the two latter, because sound and music are described in these lines.

As expected, Pan is a flute player and a dance lover, playing with Nymphs in the nature. We may be surprised that Pan is worshipped in the sanctuary of Asklepios. This is the same for the Mother of the Gods, but we know that both gods, Pan and Cybele, have in common a strong relationship to nature and to fertility. Like Asklepios, they are not chthonian gods but they are related to rebirth and in a certain way to magic. If we consider the three gods all together, we understand that sound and music have an apotropaic function. In the hymn to the Mother of the Gods, is mentioned the tympanon, that is the frame drum:⁵⁴

[Ματρὶ θεῶν].

[ὦ Μναμοσύνας κ]όραι | δεῦρ' ἔλθ'ετ' [ἀ]-
 π' ὠρανῶ | καὶ μοι συναείσατε | τὰν
 Ματέρα τῶν θεῶν, | ὡς ἦλθε πλανωμ[έ]-
 να | κατ' ὥρεα καὶ νάπας, | σύρουσ' ἀβρ[ότ]α[ν]
 κόμαν, | κατωρημένα(!) φρένας. |
 ὁ Ζεὺς δ' ἐσιδὼν ἄναξ | τὰν Ματέρα τῶν
 θεῶν, | κεραυνὸν ἔβαλλε καὶ | τὰ
 τύμπαν' ἐλάμβανε | πέτρας διέρρησσε
 καὶ | τὰ τύμπαν' ἐλάμβανε. | “Μάτηρ,
 ἄπιθ' εἰς θεούς, | καὶ μὴ κατ' ὄρη πλάν[ω], |
 μὴ σε(!) χαροποι λέον|τες ἢ πολιοὶ
 λύκοι” | “καὶ οὐκ ἄπειμι(!) εἰς θεούς, |
 ἂν μὴ τὰ μέρη λάβω, | τὸ μὲν ἤμισυ
 οὐρανῶ, | τὸ δὲ ἤμισυ γαίης, | ν
 πόντῳ τὸ τρίτον μέρος· | χοῦτως
 ἀπελεύσομαι.” | χαῖρ' ὦ μεγάλα |
 [ἄν]ασσα Μᾶτερ Ὀλύμπῳ.

vac.

54 IG IV² 1.131. See Furley – Bremmer 2001, 167-175 and 214-224.

Goddesses [of music] come down from heaven and sing with me a hymn to the Mother of the Gods: how she came wandering over the hills and vales her [long] hair trailing, distraught in her senses. Zeus the great king saw her—the Mother of the Gods—he aimed a thunderbolt and took the drums, he split rocks in two and took the drums. “Mother, be off to the gods! Don’t wander over the hills in case the ravening lions or timber wolves [get] you . . .” “... I won’t go off to the gods unless I receive my share: a half of the sky above and a half of the earth and, third, a half of the sea. Only then I will go”. Hail! Great Queen! Mother of Olympos!

As we can also read in the Homeric hymn to the Mother of the Gods, the sound of tympanon is accompanied by animals like lions and wolves,⁵⁵ that is wild beats whose cry is remarkable, especially in the silence of the night, like the dog, the cockerel and the snake for Asklepios.

This hymn is written in telesylleans (acephalic glyconians). As far as music is concerned, the most interesting verses are also the most difficult of the whole poem. The tympanon is repeated twice but the subject of the verb ἐλάμβανε is not expressed, so that in a strict grammatical point of view, it should be Zeus, who is the subject of ἔβαλλε. There is a reverse phonic echo between the consonants in ἔβαλλε and ἐλάμβανε and we can be sure that the verbs are firmly attached. The exact repetition of the formula τὰ τύμπαν’ ἐλάμβανε is surprising, like a refrain inside the hymn. First it is preceded by the mention of the thunderbolt and secondly by the destruction of the rock. Both are sonic events: the noise of the sky appears to our ears as a percussion. Doubtless the poet rewrites here the Homeric hymn to the Mother of Gods, where the music is related to sonic natural phenomena. The parallel between both texts is underlined by the cries of animals. However, the Homeric text does not say any word on the taken tympana. We may rather think of Euripides’ *Bacchae* where Rhea, an avatar of the Mother of Gods, is said to have invented the tympanon.⁵⁶ So the question remains: who is taking the tympana? I would suggest we could understand this is Zeus because of the link between the sound of the frame drum and what he does. As he says later, he fears the Mother of Gods might be attacked by wild beasts, so he produces sounds to frighten them and protect the goddess. The frame drum is already invented and we may imagine it becomes the attribute of the goddess later. Then the text, with the repetition of the τὰ τύμπαν’ ἐλάμβανε, would be mimetic of the thunderbolt shocking the earth and the rock.

55 See Perrot 2014.

56 Euripides, *Bacchae*, 59.

Another god received a hymn in Epidauros:⁵⁷

Πανί.

Πᾶνα τὸν Νυμφαγέτα[ν], | Ναϊδων μέλημ' αἰείδω, |
 χρυσέων χορῶν ἄγαλμα, | κωτίλας ἀνακτα [μ]οίσας. |
 εὐθρόου σύριγγος εὐ[χο]ς, | ἔνθεον Σειρήνα χεύη·
 ἐς μέλος δὲ κοῦφα βαίνων | εὐσκίων πῆδα κατ'
 ἄντρων, | παμφυῆς νωμῶν δέμας, | εὐχόρευτος εὐ-
 πρόσωπος, | ἐνπρέπων ξανθῶι γενείωι. | ἐς δ' Ὀλυμπον
 ἀστερωπὸν | ἔρχεται πανωδὸς ἀχώ, | θεῶν Ὀλυμπίων
 ὁμίλον | ἀμβρόται ῥαίνουσα{ι} {ῥαίνουσα} μοίσαι. | χθῶν δὲ πᾶσα καὶ
 θάλασσα | κίρνεται τεὰν χάριν· σὺ | γὰρ πέλεις ἔρισμα
 πάντων, | ὦ ἰὴ Πᾶν Πάν.

To Pan, leader of nymphs, darling of Naiads, I sing, pride of the golden choruses, lord of the twittering music; from his far-sounding flute, he pours an inspirited seductive melody; he steps lightly to the song, leaping through the shadowy caves, displaying his multiform body, good dancer, beautiful face, resplendent with blond beard. As far as starry Olympus comes the panic echo, pervading the company of the Olympian gods with an immortal music. The whole earth and the sea are stirred by your grace; you are the prop of all, O hail Pan, Pan.

If we have a precise look at the sounds in this hymn, we realize that there are many effects, which are supposed to signify the relationships between Pan and music. This is not only the mention of syrinx, which is of course a first clue. Pan's music, expressed twice as μοῖσα, is also compared with the music of Sirens, a music inspired by gods, full of gods (ἔνθεον). We may wonder why Pan plays the same melody as Sirens. Should we understand that this is a seductive melody, which leads to death? In that, there could be a link with the panic, the fear Pan creates inside the heart of enemies. Indeed, in some texts, this panic is produced with a conch belonging to Pan.⁵⁸ The conch is an animal living in water and the Homeric Sirens are singing on the shore. But Pan is a syrinx player, not a conch player here. Therefore, there might be another explanation. Pan and Sirens as well are hybrid daemons, made of a human part and an animal part, a goat or a bird. They both play instruments, if we consider the Sirens as depicted on Greek vases. I think there is a link between Pan and

57 IG IV² 1130. See Furley – Bremmer 2001, 193-198 and 241-243.

58 Eratosthenes, *Catasterismi*, n° 27.

Sirens, in that both are associated to a landscape that reverberates the sounds they produce. It is a kind of personification of the natural sounds, in caves and on the shores. So Pan's melody is quite mysterious and frightening, but not necessary seductive. It is inspired by gods because only gods know the secrets of the whole universe. Homer' sirens sing they know everything that may happen on the earth of human beings.⁵⁹ Let us remember that the only musician who could fight against Sirens with his lyre was Orpheus, who is told to teach the hidden things of the *kosmos*. That is why this god has got his place among the Olympians close to the stars according to the poet of this hymn, or better, of this paean.

It is composed in trochaic dimeters, which is not a very common feature for hymns. Each dimeter is characterized by a phonic unity, in that some sounds are repeated to build a coherent line. As an example, we may study the first part of the poem, where the musical skills of Pan are particularly developed. The diphthong *eū* plays a significant role, which is expected in worshipping a god. Regarding the rhythm, by consequence there are some trochaic words, and among them, some are related to music: *εὐχόρευτος εὐπρόσωπος* is the best example. Many terms indicate that Pan is not only delighted by music but also by dance, as a Nymphagetes. Yet the most common feature consists in placing at the beginning of each dimeter a cretic word, a variant of the paeon:

Πανί.

Πᾶνα τὸν Νυμφαγέτα[ν], | Ναῖδων μέλημ' αἰείδω, |
 χρυσέων χορῶν ἄγαλμα, | κωτίλας ἄνακτα [μ]οίσας. |
 εὐθρόου σύριγγος εὐ[χο]ς, | ἔνθεον Σειρήνα χεύη·
 ἐς μέλος δὲ κοῦφα βαίνων | εὐσκίων πῆδα κατ'
 ἄντρων, | παμφυές νωμῶν δέμας, | εὐχόρευτος εὐ-
 πρόσωπος, | ἐνπρέπων ξανθῶι γενείωι. | ἐς δ' Ὀλυμπον
 ἀστερωπὸν | ἔρχεται πανωδὸς ἀχώ, | θεῶν Ὀλυμπίων
 ὄμιλον | ἀμβρόται ραίνοισα{ι} {ραίνοισα} μοίσαι. | χθῶν δὲ πάσα καὶ
 θάλασσα | κίρναται τεὰν χάριν· σὺ | γὰρ πέλεις ἔρισμα
πάντων, | ὦ ἰὼ Πᾶν Πᾶν.

This is not a hazard considering the fact that the hymn is actually a paean, as shown by the last line, although the paeon is not originally the meter used for paeans: there were no specific rhythmical patterns.⁶⁰ However, in the

59 Homer, *Odyssey*, XI, 191.

60 Käppel 1992; Schröder 1999.

Hellenistic times, it seems that the paeon became the meter designed for paeans, as shown by the Delphic hymns. Here we get an example of the emergence of the paeonic rhythm inside the trochaic pattern. There is obviously a word play between Paian and Pan. The hearer expects the traditional formule ἢ Παιάν, but the composer creates a surprising effect, although Pan is the god whom the text is dedicated to. The composer introduced some words built on the root of παν-, to make the echo more hearable: παμφυές, πᾶσα, πάντων and the most interesting one, πανωδὸς ἀχώ. Pan is the god who sings everywhere. This not so far away from Plutarch's idea of the great Pan, who may be related to the figure of the Mother of Gods, the Physis. That is why Pan is παμφυές, honoured by the whole land and sea. The text then may be read as a sound box rendering the harmonies for Pan.

In Kos, one of the fountain is protected by a relief with Pan playing syrinx.⁶¹ Since the sanctuaries of Asklepios have a particular link to the sounds of nature, especially water, it is obvious that Asklepios and Pan have common points. In narratives of ancient travellers, Pan may also be associated with supernatural sounds interpreted as *aulos* and cymbal.⁶² The sound of percussion was maybe to be heard in the ceremonies of Cybele, Pan and of Dionysos, but also in the sanctuaries of Asklepios, as shown by the presence of the theatres and the votive offerings.

To sum up, texts, pictures and archaeological remains show some unseen elements in the cult of Asklepios regarding the power of music in healing the body. There is a strong importance of sounds that are used in two perspectives: the sound of water and the silence of the night are appropriated to calm patients so that the cure may happen by divine means, whereas the cries of animals suit the chase of bad daemons and spirits. Both kinds of sounds have opposite goals but the same effect: to provide health to sick people. The human body is part of its milieu in that it never stops hearing positive or negative sounds. Therefore we understand why ancient Greeks were aware of the importance of sounds in the sanctuaries of Asklepios, especially in the *dormitoria*, the incubation rooms. Much more, we see the relationships between Asklepios and Dionysos: the presence of the theatres in sanctuaries of Asklepios is enlightened by the sound proximity of both cults.

61 Μποσπάνης 2014, 39.

62 Jacob 2001.

Abbreviations

- Erythrai* McCabe, D.F. 1986. *Erythrai Inscriptions. Texts and List* (Princeton)
ID *Inscriptions de Délos* (Athènes – Paris)
IG *Inscriptiones Graecae* (Berlin)
IGR Cagnat, R. 1901-1927. *Inscriptiones Graecae ad res Romanas pertinentes* (Paris)
Oikonomos, Epigraphai Οικόνωμος, Γ. 1915. *Επιγραφαί της Μακεδονίας* (Athens)
SEG *Supplementum Epigraphicum Graecum* (Leiden)

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Aristotle on the Power of Music in Tragedy

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Abstract

Against the almost undisputed *communis opinio* among interpreters of the *Poetics*, I argue that spectacle in general, and music in particular are of crucial importance in Aristotle's conception of tragedy. In enhancing the spectators' emotions of pity and fear, music (i.e. *aulos* music) contributes to obtaining the pleasure 'proper' to tragedy which, as Aristotle says, "comes from pity and fear through mimesis".

Keywords

aulos – tragedy – Aristotle – the *Poetics* – musicians – chorus – emotions

Interpreters generally take Aristotle to have totally downplayed the role of the spectacle, and since music is part of the spectacle, it is implied (although rarely explicitly stated) that he must also have considered music as a negligible detail not really worth considering when writing the *Poetics*.¹ And indeed, it is indisputable—and I won't dispute it—that *muthos* plays the major role in Aristotle's conception of tragedy. But as I want to show in this paper, this should not lead us to conclude, as most interpreters do, that spectacle in general and music in particular do not have an important, even crucial, role to

1 Articles on spectacle in the *Poetics* are quite numerous; the two most vigorous defence of such negative readings are perhaps Hall 1996, and Perceau 2013. Notable exceptions to this main stream are Scott 1999 (but his main arguments are not exactly mine), as well as Konstan 2013 and Sifakis 2013. See also the remarkable finding of Andrea Rotstein who has demonstrated that 1447a13–16 must refer to musical contests: even if Aristotle does not name the Great Dionysia or any other festival, he does have those in mind when writing the *Poetics* (Rotstein 2004).

play in the aim a poet must have in mind when composing his play, i.e. what Aristotle terms “the proper pleasure” of tragedy.

1 The Importance of Spectacle

The term *opsis* seems to be used in the *Poetics* in two senses, one general, meaning what we call “spectacle”, i.e. the play’s staging (see esp. 1450a10, and 13), and in a more specific way for visual effects, which include masks, costumes, and scene-painting (see esp. 1450b20 with 1449a18 and 1449a36).² Under the general conception, *opsis*, the actual staging, obviously includes music.³ So if it is true that Aristotle downplayed the importance of staging it must also be true that he does so too as regards music. And indeed doesn’t he seem to dismiss the role of the chorus when praising Aeschylus for having “reduced the parts of the chorus” (1449a17)?⁴ And as to music itself (which in fact not only accompanied the chorus but also some parts played by the actors), doesn’t Aristotle say that it only offers some *hēdusmata*, that is “seasonings” to the plot (*muthos*) that constitutes the main dish? And the same goes for *opsis*: spectacle (or perhaps visual effects) may be something *psychagōgikon*, he says in chapter 6 (1450b15-16), but all of that must be very marginal as it is not what the poet himself should focus on; indeed, *opsis* is “a very small part of the art (*atechnoton*), I mean that it has only a very small part to play in the art of poetic composition” (1450b16-17).

I won’t offer a detailed defence of the importance of spectacle against that standard view here; suffice it to offer a few key arguments that should rehabilitate *opsis* in general, before getting into the question of music itself.

Let’s first take the definition of tragedy from chapter 6. There Aristotle says that “tragedy is the representation of a momentous action which makes up a whole and possesses a certain length; [...] it is acted out by actors and not conveyed in reported speech (δρῶντων καὶ οὐ δι’ ἀπαγγελίας) [...]” (1449b24-27). The Greek δρῶντων is perhaps not as straightforward as my English translation would have it, and quite a few interpreters seem to understand it to refer to the

2 This distinction is not always clear: for example, at 1450b16, 1453b1, or 1459b10, one may genuinely hesitate between the two options. But that plays no role in my argument.

3 At 1450a9-11, Aristotle clearly presents *opsis* as the “manner” of the play, while *melopoia* belongs, with *lexis*, to its “means”. It is only when the play is actually performed that music can take place while of course the other means, *lexis*, remains present while the play is only read, not performed.

4 When quoting the *Poetics*, I use the English translation I have prepared with Ada Bronowski.

characters acting in the play, and not specifically to the actors who impersonate the characters on stage.⁵ But when in the following paragraphs he explains the constitutive parts of tragedy, Aristotle very clearly presents *opsis* as the mode, literally “how” one represents in tragedy (1450a9–11, where ὅψις is described as ὡς δὲ μιμοῦνται). Thus, the entirely mimetic, or “dramatic” mode which was presented in chapter 3, where the poet must have all the characters speaking directly, while the poet never speaks in his own voice, must be conceived of as implying the staging of those characters and their dialogues.⁶

The definition of tragedy is not the only place where Aristotle takes spectacle as being of crucial importance in dramatic poetry. Let’s review the two main passages where this strong, consubstantial link is emphasized. Our first passage is chapter 4, where Aristotle famously states what he takes to be the two main natural causes explaining the birth of dramatic poetry: 1. The natural instinct for mimesis, and 2. A similar instinct for melody and rhythm. As he says: “Mimesis then, comes naturally to us, just as melody and rhythm (different meters being variations of the beat). Thus from the beginning, it was those most gifted for these activities who developed them gradually so as to give rise at last to poetic composition out of their own improvisations” (1448b20–24). So here again we are confronted with spectacle in general: our typically human instinct for mimesis, which basically amounts here to mimicking or imitating voices and behaviors, is what explains the birth of acting; and the no less typically human instinct for rhythm and melody is what explains its important usage in dramatic poetry—that is more specifically in music, dance and verse. And not only that. As Aristotle also emphasizes in chapter 4, poetry typically produces pleasure; indeed, by nature too, we take pleasure in attending, or looking at, a *mimēma*. The example given is of a piece of visual art (whether a painting or sculpture) but *mimēma* could also refer, more basically, to any

5 The clearest example of such an understanding of δρώντων καὶ οὐ δι’ ἀπαγγελίας is to be found in Dupond-Roc & Lallot 1980 French translation: “la représentation est mise en œuvre par les personnages du drame et n’a pas recours à la narration”. Following Bywater, quite a few English translators render δρώντων by “in a dramatic form” *vel sim.*, which tends to refer to the agents, or the characters of the play, instead of the actors.

6 Note that the last part of chapter 3’s much discussed first sentence makes the best sense if directly referred to actors: “There is yet a third distinction to make, namely how each of these kinds of character can be represented. For indeed, though using the same means and representing the same characters, a poet can either use reported speech [...] or let the actors totally represent the active parties to the action”—reading: ἢ πάντα ὡς πράττοντας καὶ ἐνεργοῦντας τοὺς μιμουμένους, where Casaubon’s emendation πάντα must be accepted if one wants to make sense of the mss τοὺς μιμουμένους (Kassel is forced to delete τοὺς μιμουμένους in order to maintain the mss πάντας).

product of mimicking.⁷ And it is also certainly the case that not only do we enjoy looking at a *mimēma*, but we do also enjoy the activity of mimicking, and of course the same goes for music and dance. In other words, these two causes not only explain how dramatic poetry arose, but also why we naturally take pleasure in it, especially when attending its staging with music and dance. And on this very point, it is particularly interesting to note the tradition he reports, that tragedy owes its origin to the dithyramb (1449b10–11). Interpreters have rightly said that tragic dialogue may find its origin in the dialogues between the dithyramb's chorus and its leader; but one should add that the dithyramb is also a piece where dance and song have primary importance.⁸ By this, I don't want to mean that the dithyramb actually had a prominent role in the birth of tragedy—but what is striking is the fact that Aristotle chose to give that poetic-cum-musical genre a crucial role in that putative birth, which would be hard to explain if he had not taken music to have a prominent role in tragedy.

Our second main passage is at the very end of the *Poetics* when Aristotle defends the preeminence of tragedy over epics. He defends tragedy against people who take epics to be more worthy because they think spectacle is not worthy of virtuous citizens. In fact, Aristotle forcefully replies, it is the bad actors and, as we will also see, the bad musicians, who should be blamed, not spectacle itself. And by bad actors (and bad musicians) he means the ones who make forced and vulgar gestures, like the actors Callipides and Pindar who, he reports, were in effect named “apes” (1461b34–36).⁹ And it is quite noteworthy that his conclusion also includes dance: “It is not any kind of movement that must be rejected, unless they also want to get rid of dance!” (1462a8–9)—a quite forceful, ironic word which would sound rather strange if Aristotle had wanted to downplay the importance of spectacle. And indeed here is his unwavering conclusion: “No, it is only the movement of the bad actors—just as Callipides back then was criticised and as today others are, for they represent the female characters as if they were of lowly condition” (1462a9–11). So what Aristotle reproaches Callipides and others for is not so much vulgarity per se, but the very fact that because of their exaggerated and vulgar acting, they fail to represent their characters correctly: instead of impersonating a “noble” heroine,

7 See Plato, *Crat.* 423b–c.

8 Something Aristotle also stresses in *Politics* 8, when talking about aulos music (1342b3–7). On the importance of the dithyramb in Aristotle's genealogy of tragedy, see Depew 2006; and on music specific to the dithyramb, see now esp. D'Angour 2013.

9 On gestures by musicians more generally, see Bélis 2011 who reviews numerous other texts from all periods of antiquity.

such as Medea, they give their audience the impression that they are facing a woman of lower condition, which is of course contrary to the one crucial condition of tragedy, namely that characters must be *spoudaioi*.

Thus, there is nothing to be condemned in spectacle, and those critics are wrong in arguing for such a condemnation in order to defend epics against tragedy. Quite to the contrary. If we follow the logic of what we have in the very definition of tragedy, one of the main advantages of tragedy over epics is that the former is fully dramatic, which implies spectacle. But why is dramatic mimesis “better”? Because, as Aristotle quickly but firmly says, *opsis* is something *psychagōgikon* (1450b16-17). And since *psychagōgikon* apparently refers to both the stirring up of the emotions, and the pleasure such stirring up affords (and indeed translators hesitate between rendering that as “pleasurable” or “emotional”), it therefore means that spectacle is what helps poetry achieve its goal, that is providing the audience with “the pleasure coming from the emotions of pity and fear through *mimesis*” (1453b12).

Now, Aristotle seems to be clearly saying that reading a play should suffice for enjoying it properly. In our final chapter, just after replying to the criticisms launched against spectacle, Aristotle adds that, in fact, “even without any movement, tragedy produces its own effect, just like epic. Reading is enough to tell how good or bad a tragedy is” (1462a11-13). So doesn’t Aristotle admit that if the spectacle is perhaps not a bad, or vulgar, thing as critics have said, spectacle is nevertheless not necessary in order to enjoy it? And this does not seem to be a sort of afterthought, or ad hoc argument. Here is what he said earlier in chapter 14: “Fear and pity can be achieved through visual effects. But they can also arise from the structure of the events itself, which is better and the sign of a first rate poet. For the plot should be constructed such that, even without seeing it on stage but merely on listening to someone reading out how the events unfold, one shudders and is moved to pity because of what happens. That is exactly what a person would feel on hearing the plot of *Oedipus Rex*. Producing this effect through visual means in the staging is less a question of the poet’s skill than of production funds” (1453b1-8). In other words, doesn’t he mean that attending the play in the theater is just dispensable?

Despite the appearances, I don’t think that standard conclusion can be right. There is a detail which we find in both quotations that is absolutely crucial: in both cases, Aristotle emphatically adds the adverb *kai*, “even”. So he is not saying that reading a play should be the ideal case; he only says that *even* in the case one has the opportunity of reading a play or listening to someone reading it aloud, it should be sufficient for becoming emotionally involved. In other words, a good poet is the one who is able to create such a good plot that

even in merely reading it (as Aristotle himself probably had to in many cases),¹⁰ one experiences strong emotions, and therefore the pleasure that goes with it. But nothing indicates that that should be the ideal case. If we follow Aristotle's own logic which sees dramatic enactment, and (at least putative) staging as an advantage that tragedy has over epics, it would be contradictory to have him praising the mere reading of a play as an ideal situation: that would amount to reducing dramatic poetry to epic, narrative, poetry.

2 Music as Pleasure Enhancer

After this introduction, it is time to get to the two most crucial characterizations of music in the *Poetics* (I'm printing Kassel's OCT text):

ἡ μελοποιία μέγιστον τῶν ἡδυσμάτων (1450b16)

ἔτι οὐ μικρὸν μέρος τὴν μουσικὴν [καὶ τὰς ὄψεις], δι' ἧς αἱ ἡδοναὶ συνίστανται ἐναργέστατα (1462a15-17)

Let's begin with the latter, which comes just after the quotations from chapter 26 I have just reviewed. This argument comes after Aristotle has refuted people who accuse tragedy of being vulgar and suitable for vulgar people because it was acted out. Acting, Aristotle replies, is not at all a bad or vulgar thing—only bad actors act in a vulgar manner; and the same goes for dancing. So when he adds that in fact μουσική is no negligible part, this should be taken as a positive answer to those people: not only is the stage with actors and dancers not a bad or vulgar thing at all, but in fact μουσική, which of course implies the staging of the play, is what makes its audience's pleasures most vivid. And since pleasure is the goal that the poet must aim at producing in writing his plays, enhancing that pleasure is thus, as Aristotle indeed says, “not a small thing” (οὐ μικρὸν μέρος)!

The term μουσική only appears here in the *Poetics*, and it may be the case that it bears a slightly different denotation than the word μελοποιία that is typically used. If we rely on chapter 6 where Aristotle says that “its meaning should be self-evident”, μελοποιία seems to refer to sung parts of the play (mostly the

10 It is worth noting though that Aristotle may have attended many more plays than one generally takes him to have done, since Euripides' but also Sophocles' plays were apparently quite often re-staged at his own time. On reperformances of Sophocles' plays, see Finglass 2015.

chorus parts, but it may also of course refer to the actors' songs) in contradistinction to the dialogues in rhythmical but not melodic speech: it then means here, quite literally, the composition of the *melē*, that is the sung parts accompanied by music. In *Politics* 8 where the term *μουσική* is repeated again and again, it seems to be used in a more general way, and denotes approximately what we call 'music', that is the compound of rhythm and melody, whether or not there are words that are sung too: "everyone says that music is among the very greatest pleasures, whether it is unadorned or with voice accompaniment. At any rate, Musaeus says that 'singing is the most pleasant thing for mortals'" (1339b19-22). As the 'quotation' of Musaeus seems to imply, *μουσική* may consist only in sung words, but it is not qua words that it is referred to, but as a song with rhythm and melody (indeed, we may assume that a song may also consist in pure vocalisation without words). So what is at stake in *μουσική*, is specifically the rhythm and melody of music, whether or not it accompanies sung words.¹¹ It is, thus, the melodies and rhythms of music that make the pleasures "more vivid".

True, all our mss (including the Arabic and the Moerbeke Latin versions) read the phrase *καὶ τὰς ὄψεις*, "and the visual effects", that follows the first subject *τὴν μουσικὴν*: according to this unanimous reading of the mss, music would simply amount to one of the components of the staging. But I think Kassel was right in following Spengel, who first proposed deleting it as a gloss. There are several reasons that cumulatively make a compelling case for such a deletion. First, all mss also read *δὲ ἥς* which is not grammatically justifiable.¹² To be sure, reading *δὲ ἃς* as Vahlen suggested instead of *δὲ ἥς* seems to be a lighter solution than deleting one whole phrase, which is why it has been largely preferred by editors and translators. But if so, how can we explain the rather awkward singular *οὐ μικρόν μέρος* while music and visual effects are each expressly identified as one part of the play (1449b32-33; 1450b15-16)? And, more generally, the mss text hardly suits the immediate context. For our sentence is followed by the acknowledgment that, "this dazzling effect is present both when read aloud and when acted out on stage" (1462a17-18). It would be odd to have Aristotle saying that the staging can also produce those effects while he has just said that the visual effects are what give you the most dazzling ones! And, finally,

11 I agree with A. Ford (Ford 2004: 314-15) that Aristotle wants to focus on music per se and not on *μουσική* conceived as the art of the Muses more generally (as Carnes Lord has contended), even though Aristotle's usage of the term can be more relaxed as is obviously the case here.

12 Bywater (followed by Tarán) claims that there are other passages where we find a similar singular of the relative with two subjects. But the cases he gives are quite different.

as Else has rightly noticed, this passage closely resembles the chap. 6 sentence, ἡ μελοποιία μέγιστον τῶν ἡδυσμάτων.¹³ Again, it would be rather unnatural if Aristotle had added καὶ τὰς ὀψεις whereas he earlier described music as being the “biggest” ἡδύσμα in producing pleasure.

Before turning to the crucial question of how music can make those pleasures “more vivid”, let’s first analyse the very sentence saying that μελοποιία, that is performed song-cum-music, is the μέγιστον τῶν ἡδυσμάτων. ἡδύσματα typically refer to the “seasonings” that one adds to a dish to make it more savoury (in ancient Greek cooking, “seasonings” include everything from sweeteners to herbs and spices). Obviously, Aristotle chose that term because of its etymological relation to pleasure, ἡδονή (or the adjective ἡδύς): music is what enhances the pleasures a play provides its audience in the same way seasonings make a dish more pleasurable. But how are we to understand the value and importance of this “enhancing”? Interpreters relate this to a passage of the *Rhetoric* where Aristotle blames Alcidas for confusing the main dish and its seasonings in adding unnecessary, redundant epithets to words that don’t need them (at least in prose), in phrases such as “wet sweat” (*Rhet.* III 3, 1406a18–32). In consequence, the standard story goes, since plot is to be considered the main dish, music should be conceived as nothing more than an unnecessary, dispensable, or superfluous addition. But that reading, however widespread, is misleading.

As at least one interpreter has rightly suggested, one passage from Plato’s *Republic* offers a rather different story.¹⁴ There, Plato has Socrates reporting that according to Simonides, the τέχνη μαγειρικὴ, the art of cooking, consists precisely in giving a dish its proper seasonings, τοῖς ὀψοῖς τὰ ἡδύσματα (332c10–d1). In other words, the art of cooking is none other than accommodating a certain dish in a proper way. Thus, ἡδύσματα are a fundamental part of a dish here: without it, a dish would not be pleasurable, or certainly much less pleasurable, and would not count as a dish prepared according to the art of cooking. To be sure, as Aristotle forcefully says, “the plot is the principle and so to speak the soul of tragedy” (1450a38): without *muthos*, there would be no tragic drama that would exercise its *dunamis*, its specific power or effect. But a tragedy that would be without music would be like a dish with no seasonings: such a dish would be edible and permit your survival—exactly like the olive and cheese meals that the people of the “first city” described a little further down by Socrates are given to survive, which Glaucon despisingly calls the “city of pigs” (372d5); but it would not be pleasurable and not appropriate to

13 Else 1963: 643.

14 See Sifakis 2001: 54–57. On this, see also the insightful remarks by E. Belfiore 2002.

a truly human, culturally sophisticated city. And as if Plato were anticipating the metaphorical usage of the art of cooking in the context of poetry, it is noteworthy that Socrates explicitly refers to mimetic artists in this context—both poets and musicians—who are part and parcel of a symposium to be given for people who live in typically human cities (373a-b). So if it is true that a piece of poetry without a plot would no longer be dramatic poetry, it must be also true that dramatic poetry without music would not be as pleasurable as it should be—and since, as I said, pleasure is the aim of poetry, dramatic poetry without music would not fulfil its aim properly.

Now, when Aristotle says that μελοποιία μέγιστον τῶν ἡδυσμάτων, he is in fact specifying what he just said earlier, in defining tragedy. There he said: “tragedy is the representation of a momentous action [...]; it is couched in an alluring style of language (ἡδυσμένῳ λόγῳ) which takes on different forms, each one used separately at different moments of the work [...].” And as a sort of footnote—which editors usually put into parentheses—he added: “By alluring style of language, I mean the kind which has rhythm or melody—that is to say, song—and by saying that ‘its forms are used separately’ I mean that some parts of the work are brought about through verse alone, and some through song” (1449b24-31). So, the “alluring style of language” contains two kinds of parts: the spoken parts which have only the rhythm of verse, and the sung parts which have both rhythm and melody. And what constitutes the allure of the spoken parts is versification, while the allure of the sung parts is constituted by the two ingredients of music, rhythm and melody.

Again, one might be tempted to dismiss this by arguing that versification is not essential for Aristotle, who seems to repeat that being composed in verse does not characterize a poem: despite its versification Empedocles’ work is not poetry (1447b17-20), while putting Herodotus’ history in verse would not make it a poem either (1451b2-4). In order to be rightly called a dramatic poem, a plot is needed: “it is clear from all this that a poet should most of all be a creator of plotlines rather than of verse in as much as a poet’s concern is with representation and what he represents is actions. Though it may be the case that he chances to write something about events which really happened, that does not make him less of a poet; for nothing prevents what really happened to be turned into what might or could, in all likelihood, happen—it is this which makes the composer a poet” (1451b27-32). So whether the events he represents are real or fictional, creating a plot according to the rule of likelihood is what makes a writer a poet.

But in fact, Aristotle is not as straightforward as he may appear to be. He actually says that Empedocles should be called a natural philosopher *rather* than a poet (1447b19-20); and indeed, in other passages of the *Poetics*, he does

not hesitate to quote a few expressions and words from Empedocles' poem(s) as examples of such and such figures of poetical *lexis* (1457b24; 1461a24-25), obviously admiring Empedocles for creating fine figures of *lexis*. (Contrariwise, he takes him to be a bad philosopher in a passage of his *Meteorologica*, where he blames him for using poetical metaphors while natural philosophers are expected to give clear and straightforward accounts of things, 957a24-28). And in fact, this should come as no surprise given Aristotle's own explanation of the causes of poetry we have reviewed: one natural cause of poetry is precisely the human propensity for rhythm, and "meters are obviously bits of rhythm" (1448b21). And since as we have seen Aristotle must also imply that rhythm as well as melody please us naturally (which he explicitly says in the passage from the *Politics* I just quoted, 1339b19-20), it is not surprising that he takes versification along with music as being something "alluring", or the "seasonings" of a play. But how are versification and poetical *lexis* supposed to "allure" the audience, or make the plot more pleasurable?

One passage from *Rhetoric* 3 may offer an interesting clue. There, Aristotle reviews some defects of rhetorical style. Compounded words, unusual terms and metaphors are not to be used in speeches for the main reason that they obscure things unnecessarily or are at risk of sounding inappropriate or ridiculous, and are therefore not suited for persuasion. But (as we also know from the *Poetics*) these figures of *lexis* are to be used in poetry; and here is the reason why this should be so: "*lexis* using double words is most useful to dithyrambic poets, for these poets are sensitive to sound; glosses to epic poets, for these figures are solemn and majestic; and metaphor to iambic poets" (1406b1-3)—that is, tragedians for the reason that metaphors have "solemnity that is typical of tragedy" (τὸ σεμνὸν καὶ τραγικόν, b8). The first characterization is particularly interesting for my purposes as it makes the link between poetic language and music: in dithyramb, double words are primarily used for their musical properties.¹⁵ But the second and third short remarks do answer my question: these figures help poets to create special moods or feelings, or more precisely, special sorts of *diathesis* as Aristotle will say about music in his *Politics* (I'll get to this below): in this case, the sense of grandeur and solemnity that is typical of tragedy. Versification, therefore, and the poetic figures of *lexis* may thus be not sufficient condition for poetry, but they certainly are a necessary ingredient of it if the poet wants to put his audience in a certain mood, or feeling, which is supposed to play a crucial role in the typical pleasure we get from poetry.

15 This is even one remarkable feature of dithyramb: See Csapo 2011, and Ford 2012.

Now, when Aristotle forcefully says that song-cum-music is “the most important of seasonings”, or perhaps “the strongest of seasonings”, he must mean that music is what most effectively enhances the pleasures we get from a play—even more than versification does. Again, a tragedy without music, say, when we read it, is certainly pleasurable (at least when it is well composed), but Aristotle doubtlessly takes a performed tragedy with its sung parts to afford its audience a much more pleasurable experience, that is, if it is true that pleasure must be the aim of poetry, a more genuine and appropriate experience of the genre.¹⁶

3 Auletes at Work in Tragedy

Let’s finally get to the core of the matter: how does music “season” the plot? Aristotle does not explicitly ask that question but the answer must be evident: since it is through the plot he composes that the poet should aim at evoking emotions, and therefore producing pleasure, music must enhance those emotions in order to make that emotional pleasure more vivid.

True, our expression in chapter 26 uses the plural: music is what “makes pleasures (αἱ ἡδοναί) more vivid”. This plural may seem a little bit odd, but actually it isn’t. Admittedly, there is the pleasure proper to tragedy that “comes from pity and fear through mimesis”, which should be conceived in the singular since it is to be distinguished from the pleasure linked to other poetic genres—there is at least one other such proper pleasure, that of comedy (1453a36). But Aristotle mentions other such emotional pleasures, such as the pleasure linked to, or coming from, the *thaumaston*, “wonder”, or “surprise”, which we also enjoy in epic poetry, and probably in comedy too. And in the main example he gives, it is linked to pity and fear, being a sort of accompaniment of these emotions: “But representation is not only about completeness of an action but also about the events which inspire fear and pity; these will come about especially and indeed all the more so when events happen contrary to our expectations, though they follow one from another. For the surprise factor will be greater than if things merely happened spontaneously or by chance; for even events which happen by chance seem most surprising when they appear

16 There is a very interesting parallel of exactly the same idea in Plutarch (even if Plutarch relates it to moral education in a typically platonic fashion): “By applying the *hēdusmata*—melodies and metres and rythms—to speech, poetry makes the educational power of speech more moving as much as it makes potential for harm hard to guard against” (*Amatorius* 769c 7-9; cited by Sifakis [2001: 57]).

to have taken place on purpose, as for example when the statue of Mityls in Argos killed the person responsible for the death of Mityls himself by falling on him as he was staring at it" (1452a1-9). Even if this (apparently well-known) event was for real, and not a part of a play, this example shows that surprise can be used as a sort of intensification of fear, and also pity (or at least, what Aristotle calls *to philanthropon*, a "sense of humanity" for people who merit their ill fate), and that it can be used in a properly tragic way. (And of course, in a tragedy, one can easily imagine that such a surprising and unexpected event should have been accompanied by an energetic aulos blast). The plural then in our expression should not prevent our considering that Aristotle must be indeed talking about what he typically calls the pleasure proper to tragedy.

But how does this work? And what does this mean concretely? One more passage from our chapter 26 is again particularly interesting for my purposes:

For fearing lest the audience will not quite grasp things (οὐκ αἰσθανομένων) unless the actors add something themselves, a great deal of commotion is stirred up on stage just like bad pipe-players who coil over themselves when they need to represent the discus (ἂν δίσκον δέη μιμεῖσθαι) or who drags the chorus leader whenever they play Scylla (ἂν Σκύλλαν ἀλῶσιν) (1461b29-32).

So the good aulete plays his *aulos* in imitating the whistling sound produced by the spinning flight of the discus, as must have been done in a play that staged the death of Acrisius such as *The Men of Larissa*, a lost play by Sophocles. Like the bad actors who make exaggerated gestures, a bad aulete has to twist himself around like a discus spinning to make you understand that he is actually playing the discus spinning. Scylla's case provides the same phenomenon: the bad aulete has to drag Ulysses (probably with the help of some head, or body gestures) to make the audience understand that Ulysses is being drawn towards the seabed by Scylla while the good aulete does not need to do so since he can imitate Scylla's terrible roar perfectly well.¹⁷ Now what sort of pleasure is at stake here?

17 It is interesting to compare this to what Plato says in the *Laws* where he condemns imitations of animal cries, but apparently only when that sort of music does not accompany words: "You must understand, however, that it is utterly crude to be so enamored of speed, dexterity, and animal cries that one employs reed pipe or lyre other than to accompany dance and song. The bare employment of either instrument is completely unmusical showmanship" (669e-70a; trans. Meyer). In *Rep.* 396b, he also condemns the imitation of such cries when they are performed by men (Wilson 2005: 185 sees this as performed by

One might be tempted to read this from the chapter 4 perspective: recognizing that this aulos phrase is a mimesis of the sound of a spinning discus, or that that one is of the monster's roar provides you with the pleasure of recognition, as is the case when I recognize this figure in a painting as being such and such man (1448b15-17). But this would be a strangely distant, dispassionate reaction. Rather, what a theater audience would typically experience when hearing such high-pitched, unharmonious and wild sounds of the aulos, is much more likely to be something like *phrikē* (or *phrittein*), literally "goosebumps"—a very physical and vivid way of describing the fear which is frequent in tragedies, and which Aristotle uses once in the *Poetics* when evoking the terrifying and dreadful *muthos* of Oedipus-Rex (1453b5). The audience, that is, "realizes" in the most direct, emotional way what is going to happen to these characters: an unavoidable and unmerited *pathos*, that is, as Aristotle says, "an action conducive either to death or great pain such as we get to see on stage: violent deaths, extreme torment, gory wounds and the like" (1452b11-13), and which is indeed one of the main ingredients of tragedy that cause spectators' fear and pity. Or, more precisely, the aulos's high-pitched (and most probably at a high volume) phrases are meant to enhance their growing fear and pity for those heroes.

Admittedly, the example of Scylla (which is also mentioned earlier, 1454a31) is most probably not taken from a tragedy but refers to the dithyramb by Timotheus. Interestingly enough, though, it is also the example of a dithyramb that Aristotle evokes when, in a passage of the *Politics*, he wants to illustrate the power of the Phrygian mode which, he says, "has the same power (δύναμιν) among the harmonies that the aulos has among the instruments, since both are frenzied and emotional (ὀργιαστικά και παθητικά); for all Bacchic frenzy and all motions of that sort are more associated with the aulos than with any of the other instruments, whereas among the harmonies, the Phrygian melodies are the ones that are suited to them. Poetry shows this clearly.¹⁸ For example, the dithyramb is generally held to be Phrygian. And experts on these matters cite many instances to prove this, notably, the fact that when Philoxenus tried to compose a dithyramb—The Mysians—in Dorian, he could not do it, but the very nature of his material forced him back into Phrygian, which is the harmony naturally appropriate to it" (1342b1-7).

aulos, but there is no indication of that in the text); a little further down though (399d), he banishes the aulos from Kallipolis, because it is the "the most multi-stringed" instrument, that is, the instrument that can produce all possible sounds, including, we may suppose, those animal cries.

18 Following Richards (and Ross), I read this here while the mss read it after ὀργιαστικά και παθητικά at 1342b3, which oddly interrupts the argument.

Two points are interesting for my purposes. First, here too we see that Aristotle does not hesitate to mention a dithyramb for the obvious reason, again, that dithyramb was probably the most musical genre of poetry, and because of the enormous success composers such as Timotheus and Philoxenus (who is also named in the *Poetics*, 1448a15) had, which was probably still very much alive in the mind of all of his readers. (And indeed, Timotheus is a musician who Aristotle himself seems to have praised, he who compares him and his songs to his predecessors in philosophy to whom, he says, we are to be grateful for the truths they have discovered).¹⁹ And, secondly, the aulos is here explicitly presented as a particularly “frenzied and emotional” instrument. And this is indeed something of crucial importance in this treatise on musical education: it is because it is such an emotional instrument that Aristotle strictly forbids the future citizens of his ideal city from playing it! For, unlike the lyre and the Dorian mode, which are supposed to bring souls into a state of “balance and calm” (μέσως δὲ καὶ καθεστηκώς, 1340b3),²⁰ the aulos is not at all suitable for moral education in the right mean in virtues: the music it produces provokes strong emotional reactions such as ἐνθουσιασμός, or, as Aristotle explicitly adds in the famous passage on music for katharsis, “pity and fear” (ἔλεος καὶ φόβος, 1342a7). The context of this passage may or may not refer to tragedy; but it clearly points to the fact that music (that is, the aulos, even if it not specified here) is used for evoking, or (in case music accompanies words) enhancing those emotions.

Another passage from *Pol.* 8 may be also useful for our purposes:

Musical modes have divergent natures, so that listeners are affected differently (ἄλλως διατίθεσθαι) and do not respond to each in the same way. They respond to some (for example, the so-called Mixolydian) in a more mournful and anxious way (ὀδυρτικωτέρως καὶ συνεστηκώς); to others

19 *Met.* α 1, 993b11-16. See esp. Aquinas' commentary on this passage: “Now it is only fitting that we should be grateful to those who have helped us attain so great a good as knowledge of the truth. [...] By way of an example he mentions the founders of music; for if there ‘had been no Timotheus,’ who discovered a great part of the art of music, we would not have many of the facts that we know about melodies” (*Comm. Met.* 288; trans. Rowan).

20 See also 1342b 12-17: “As for the Dorian, everyone agrees that it is the steadiest (στασιμωτάτης οὔσης) and has a more courageous character than any other. Besides, we praise what is in a mean between two extremes (τὸ μέσον τῶν ὑπερβολῶν), and say that it is what we should pursue. So, since the Dorian has this nature, when compared to the other modes, it is evident that Dorian songs are more suitable for the moral education of younger people”.

(for example, the more relaxed modes), their response is more tender-minded; their response to the Dorian (which is held to be the only mode that produces this effect) is particularly balanced and composed (μέσως δὲ καὶ καθεστηκότως), whereas the Phrygian creates ecstatic excitement (ἐνθουσιαστικούς) (1340a40-b5) (Trans. Reeve with some revisions from Barker).

Thus, music exercises a great power on the soul; and depending on the respective mode (or tune), it confers either “calm and balance” to the soul, or “ecstatic excitement”, or it puts them “in a more mournful and anxious way”. Aristotle speaks here about modes of music as such, and not about specific genres of poetry where such and such mode of music may be used; but it is striking that the Mixolydian mode was apparently the mode of music that typically accompanied tragedies. This is what Plato already seems to be alluding to when in a context where theater and performance of poetry is at stake, he is talking about “lamenting modes” (θρήνῳδεις ἁρμονίαι, which refer to θρήνων γε καὶ ὀδυρμών) that accompany words, such as the Mixolydian and Syntonolydian modes (*Rep* 398d-e). And it is what Aristoxenus explicitly admitted if we can trust what Ps-Plutarch writes: “The Mixolydian mode is also emotional (παθητική), and appropriate for tragedies. Aristoxenus says that it was Sappho who originally invented the Mixolydian, and that composers of tragedies learned it from her” (*de Mus.* 16—trans. Barker, slightly mod.). So whether or not Aristotle alludes to tragedy in our passage from the *Politics*, one may easily suppose that in the case of tragedy, he would have recognized the power that such lamenting mode of music adds to the emotions of pity and fear.

And finally, there is another interesting precision that Ps-Plutarch immediately adds: “That is, they adopted this mode and linked it to the Dorian, since the latter expresses magnificence and dignity (τὸ μεγαλοπρεπὲς καὶ ἀξιωματικόν), and the former emotion (τὸ παθητικόν); and tragedy is a blend of both” (*Ibid.*). Using the Dorian mode here has nothing to do with education in the virtues; it only has the role, one may suppose, of helping the audience enter into the dignified mood, as it were, of tragedy, for which Plato often uses (in fact, in a quite ironic way) the word *semnos*, “elevated”. Or, perhaps more precisely, the Dorian mode should help the audience in admiring those characters of which Aristotle insists they must be *spoudaioi*, “noble”, in contradistinction to the *phauloi*, “vulgar”, characters of comedy. And, most probably, such a mode, “calm and balanced” as Aristotle says, was meant to exert an effect in stark contrast to the nervous and high-pitched tone of the Mixolydian, counterbalancing the emotional reaction the latter exerts. Perhaps, this contrast effect

was meant to correspond, on an emotional level, to the crucial fact that these *spoudaioi* characters did not merit their *pathos*.²¹

4 The Role of the Chorus

Now what about the role of the chorus? In the *Poetics*, there are two crucial passages:

Regarding the number of actors: Aeschylus was the very first to bring the number to two; he reduced the parts of the chorus and gave dialogue the leading role (τὸν λόγον πρωταγωνιστεῖν παρεσκεύασεν). Sophocles introduced a third actor [...] (1449a15-19).

As far as the chorus is concerned, it should be considered as one of the actors (ἕνα... τῶν ὑποκριτῶν), as a piece of the whole (μέριον εἶναι τοῦ ὅλου) and should be part of the play (συναγωνίζεσθαι) not as in Euripides but more like what Sophocles does. For the other poets, the sung parts are no more part of the plot than in any other tragedy. For this reason we have choral interludes, a practice begun by Agathon. But what is the difference between choral interludes and adapting a speech or a whole episode from one piece to another? (1456a25-32).

Along with their dismissal of spectacle, many interpreters have held these passages against Aristotle as if he had wanted to get rid of the chorus: if indeed he considers the plot and consequently the dialogues as the real flesh of tragedy, the parts devoted to the chorus should inevitably be reduced. In the second passage, he seems to offer a sort of rehabilitation of the chorus: if the plot is the core of tragedy, and if one wants to have a chorus that is a real part of the whole play, the chorus must then be conceived as an active part of it. But as S. Halliwell has claimed, it sounds rather like a paradoxical afterthought which can hardly hide its "lack of conviction"; for, as he says, "elsewhere in the *Poetics* Aristotle does nothing to give substance to his recommendation", and there is "no compelling reason for preferring a Sophoclean chorus to no chorus at all".²²

21 Another such contrast effect is described by the author of *Problems* 19: "Why is recitative in songs tragic? Is it because of the contrast? For the contrast evokes emotions and is found in extreme calamity of grief, while uniformity is less mournful" (6, 918a10-13, trans. Mayhew). On this difficult passage, see Hall 1999: 107.

22 Halliwell 1986: 242.

I don't think this reading does justice to Aristotle's views. Aristotle obviously agrees that Aeschylus did well in giving the leading role to the dialogues, and consequently in reducing the parts of the chorus; but that need not mean that he therefore reduced its importance in term of value. In fact, in recommending that the chorus be dealt with as an actor is nothing like an afterthought: a chorus whose length is reduced permits to take it seriously as an actor, that is an actor that stands in front of the other actors, as part of the whole of the acting, or staging of the play. And this is also perfectly in line with the importance of active mimesis Aristotle stressed in chapters 3 and 4, since acting a play fully realizes the ideal of fully dramatic poetry: Aristotle's recommendation is to handle all the play's parts, actors and their dialogues, and the chorus with its sung parts, as equally involved in the acting of the play.

Now, the problem is to make clear sense of what exactly Aristotle may have had in mind. As an actor, what does the chorus do? And how does Sophocles deal with the chorus better than Euripides? One way of answering the former question consists in showing that there are many instances where the chorus does intervene in the plot, doing what actors normally do. But as Halliwell is right to object, this is not a feature specific to Sophocles (there might even be more instances of such interventions in Aeschylus than in Sophocles in this regard).²³ And in many plays, it is not evident that the parts of the chorus are really necessary for the course of the plot. One example is *Oedipus-Rex*, of which one can hardly say that by removing its choral parts, its plot would radically lose its unity and integrity. And if one takes this play as the best tragedy ever in the eyes of Aristotle (it is the play he refers to the most, and which he never criticizes), this is a tragedy that would paradoxically fail in this regard. But perhaps there is a possible alternative reading.

Translators massively understand the verb συναγωνίζεσθαι as the participation in the action of the play. But as Else has stressed, the verb here must refer primarily to the show;²⁴ and indeed while the noun ἄγων and the simple verb ἀγωνίζεσθαι are each used three times in the *Poetics* with that very meaning, it would be odd if that compound verb (unique in Aristotle's *Poetics*, and the entire corpus) would be used with a different connotation. Thus, the idea seems rather to be that the chorus is meant to participate in the show on the same footing as the actors. But what does that mean? What Aristotle says at 1450b18-19 may give us a clue: that the show as well as the actors are what augment the power (*dunamis*) of tragedy, that is the emotional effects on the spectators. To be sure, here Aristotle lays stress on the unity of the plot, and

23 See Halliwell 1984: 245, who gives numerous examples.

24 Else 1963: 552-553.

vigourously condemns the way Agathon has introduced interlude choral parts which are unrelated to the plot, and which could be easily transferred from one to another like random episodes. But the reason why he stressed the unity of the plot in chapter 7 is that unity is the condition *sine qua non* for us spectators (or in a less ideal case, readers) of the play to be involved, that is emotionally involved: an “episodic play” is a play where the audience can easily lose interest in the plot, and cannot therefore be emotionally involved in the unfolding action. So the emphasis on the show here can be understood along the same line, ultimately intended to underline that emotional involvement. Aristotle’s recommendation, thus, is not that the chorus must be part of the plot *stricto sensu*, but part of the effect that the play should have on spectators if it’s going to be a successful play. Thus, by saying that the chorus must take part in the staging of the play, Aristotle wants to stress the active contribution the chorus can make on the effect of the play.

As to Sophocles, if one sticks to his *Oedipus-Rex*, this is not very difficult to see how Aristotle would have seen his recommendation at play: if one only takes the famous stasimon when Oedipus has left the stage to blind himself, the chorus’ song is hardly intended to coldly reflect on what has happened to Oedipus, but rather to accompany as it were the spectators in their emotional involvement, and to prepare them to face one of the most dreadful scenes in Greek tragedy: the moment when Oedipus comes back on stage with his blinded, bloody eyes, wherein he will be loudly lamenting in mournful song alternating with the chorus leader—the whole song being accompanied by the aulos, presumably in a Mixolydian tune (Note verse 1312: Ἐς δεινὸν οὐδ’ ἀκουστὸν οὐδ’ ἐπόψιμον, where both the lament sung by Oedipus and the mournful sound of the aulos may be referred to).

And finally, it may be interesting to compare the role of the chorus Aristotle recommends to what we find in *Problems* 19, where the peripatetic author writes that “the chorus is an inactive attendant (κηδευτῆς ἄπρακτος), since it merely offers goodwill to those who are present on the stage” (922b26-27). Interestingly enough, it is the same idea that we find in this exchange between Oedipus and the chorus leader when Oedipus calls him his “loyal friend” who “still care[s] for this blind man (ὑπομένεις με τὸν τυφλὸν κηδεύων)” (1321-24). But if this is what the chorus leader does to Oedipus, this could hardly describe his role in that part of the play. As we have just seen, if one had to use that word, a better description of the chorus leader would be that it should serve as the attendant of the audience in its experiencing of these emotions. It is in this sense, I suggest, that the chorus must be conceived of as an “actor” participating in the play as a necessary part of the whole.

5 Music and *sumpathein*

I would like to add a last remark on the importance of music in tragedy, which we find in Plato too. At least one passage is worth reading in detail—one, extremely famous passage from *Rep.* 10, and yet one that has usually not been read with sufficient attention to what it implies as regards music:²⁵

Socrates: Listen and consider. When even the best of us hear Homer, or some other tragic poet, representing one of the heroes in a state of grief and making a long speech of lamentation, or even chanting (ᾄδοντας) and beating his breast, you know we enjoy it and give ourselves over to it. We suffer along with the hero (συμπάσχοντες) and take his sufferings seriously. And we praise the one who affects us most in this way (οὕτω διαθῆ) as a good poet.

Glaucon: Of course, I know. How wouldn't I? (605c10-d6, mod. trans. Reeve).

For Plato, this *sumpathein*, and the fact that even the best people take great pleasure in it, is of course one of the main reasons why tragedy must be condemned and kept out of Kallipolis, since repeating such highly pleasurable experiences could lead even those best people to eventually lose their courage and manliness. This is not the sort of fear Aristotle entertains towards tragedy, but there is every reason to think that he would have agreed with such a description. Two main features should strike us here. First there is the fact that Plato gives as a clear example of such strong emotions passages where the hero, such as Achilles or Oedipus, weeps and laments heavily—thus evoking strong pity in the audience. And secondly, and more importantly for my purposes, there is the fact, that the heroes involved here are singing: ᾄδοντας—of course singing in the way a rhapsodes does when he recites the *Iliad* with the accompaniment of his lyre, and (more literally) singing with the accompaniment of the aulos in the case of tragedy. This cannot be mere chance. If Plato chose to refer to a sung part of a hero's dialogue rather than a spoken part, it is precisely because there we have a clearer example of such *sumpathein* happening on the part of the audience. Which in turn indicates that such parts of tragedy, where music accompanies the words which are sung by a lamenting and grieving hero, we are at the core of tragedy, or at its emotional peak, and therefore too, even if paradoxically, at the most pleasurable moment of the

25 One exception is Hall 1999: 113.

play—indeed when the play produces “the pleasure coming from fear and pity through mimesis” that characterises the pleasure proper to tragedy.

Aristotle does not use the verb *sumpathein* in his *Poetics*, but strikingly enough he does use the adjective *συμπαθής* in the *Politics* in relation to music. Dealing with music that produces an *enthusiasmos* which constitutes the most obvious example of music producing a *pathos* in the soul, he then adds more generally: “Everyone who listens to representations comes to have the corresponding emotions (*συμπαθείς*) by the rhythms and melodies even apart from the words (*καὶ χωρὶς τῶν λόγων διὰ ῥυθμῶν καὶ τῶν μελῶν*)” (1340a12-14).²⁶ Despite the difference of context, it seems that the term’s use corresponds to a same feature. In both cases, the idea of mimesis seems crucial: when attending such a mimesis, we get involved in the emotions it conveys, whether the mimesis refers to the representation of the hero on stage, or to the mimesis of emotions that music is supposed to be. As Plato says, we take this mimesis of the hero’s sufferings seriously, or as one translator quite rightly put it, we “treat them as real”.²⁷ And the same thing is happening in music, in an even more direct and immediate way: music, as we have seen Aristotle saying, put us into such and such an *diathesis*. Again, if we read these passages in parallel, the conclusion that imposes itself is that music must be the best way to help tragedy achieve its aim, that is to produce strong emotions and the pleasure that comes from them.

Such a conclusion may also be behind what a much later author, Aristides Quintilianus wrote: “Poetry, with the medium of words alone, uses only the sense of hearing: but without melody it does not always arouse the emotions [...]. Here is some evidence: if we are to arouse an emotion in the course of a performance, this cannot be done without inclining the voice in some way towards melody” (*De Mus.* 2.4.19-24; trans. Barker). Aristotle would surely have replied: a good poet’s work is evoking emotions through the unfolding of the events that constitute the plot. But he certainly would have applauded the idea put forward by Aristides that melody, or more generally music, is a great help in making the most of it when the play is performed.²⁸

26 I accept Susemihl’s reading for this passage; the reading of the mss does not make acceptable sense in the argument (see Ford 2004: 320-21 for a detailed defence of Susemihl’s reading).

27 Tom Griffith, in his translation of the *Republic* (Ferrari & Griffith 2000: 327).

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Ethical Aspects of Listening in Plato's *Timaeus* *Pleasure and Delight in 80b5-8*

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Abstract

Plato's *Timaeus* suggests two types of responses to consonances: the perception of consonance results in pleasure (ἡδονή) for fools, but delight (εὐφροσύνη) for the intelligent (80b5-8). By investigating the physical and psychological mechanisms of perception and hearing in the *Timaeus*, this paper argues that the pleasure and pain taken in auditory perception operate analogously to the pleasure and pain of other sensory modalities. Accordingly, the fools' pleasure is (merely) a non-localized aesthetic pleasure of the mortal soul. Nevertheless, aesthesis of sounding material must be present to the intelligent individual in order for delight to arise: delight results from the correct perception of a sensory object as a mimesis of divine order.

Keywords

Plato – consonance – pleasure – perception – *Timaeus* – philosophy

...

When training as a classical musician you are asked to identify minor thirds, perfect fifths, major sevenths and so on: sounds are given names

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and are organized in relation to each other, and it becomes a matter of recognizing what is being played and attributing the right term to the corresponding tonal relationship. You cannot possibly give the right answer unless you know what you are listening for, and the 'listening for' is never the sound but its visual point of reference . . . From this moment on you are listening to the language of music . . . Sonic experience, which finds no acknowledgement in such a musical orientation . . . ceases to be heard.

VOEGELIN 2010, 52-53



In Plato's *Timaeus*, the dialogue's namesake narrates the organization of the *kosmos* and the embodied human soul, a part of that *kosmos*. Hearing and sound, as constituents of the human perceptual apparatus, are included in his account, as is a brief but intriguing description of the perception of consonance. This section (80a3-b8) moves from the material mechanics of sonic perception to a climactic exposition of the ethics of listening to consonances: Timaeus claims that the perception of concords results in pleasure (ἡδονή) for fools (ἄφροσιν) but delight (εὐφροσύνη) for the intelligent (ἔμφορσιν). This, Timaeus tells us, is "due to the mimesis of divine harmony born in mortal movements" (διὰ τὴν τῆς θείας ἀρμονίας μίμησιν ἐν θνηταῖς γενομένην φοραῖς παρέσχον).¹

Timaeus assumes that his readers will immediately recognize the experience of the intelligent as normatively preferable to that of fools. The substantives ἔμφορσιν and ἄφροσιν literally translate as "in one senses" and "out of one's senses" respectively. Εὐφροσύνη applies solely to the ἔμφορσιν since only those in their right minds could be well minded. The ἡδονή of the senseless, while not pejorative in its etymology, will be colored for the reader by other tales Timaeus has spun in which pleasure is characterized as "evil's most powerful lure" (69d1).² Whom the reader is meant imitate is not a mystery: as always in the Platonic corpus, those in their right minds, the intelligent, win the day.

1 80b5-8. Translations of the *Timaeus* are based on those of Donald J. Zeyl, with modifications (Hackett, 1997); *Philebus* from Dorothea Frede (Hackett, 1997); *Republic* from Grube and Reeve (Hackett, 1997).

2 Socrates does offer an etymology for ἡδονή in *Cratylus* 419b5-7, in which he links ἡδονή to ὄνησις. "Ὀνησις does not seem to carry negative overtones in this passage.

What is not so clear is whether or not sounding material need be present for the delight of the intelligent to arise. One plausible way of taking the passage is to suppose that pleasure is caused by the affection of the body, whereas delight is caused by the activity of thought in the rational soul. If the delight arising in the intelligent is caused by the fact that music is “audible mathematics,” and “serves as an incentive to the mind to study the relations of numbers as such,” as A.E. Taylor suggests, the activity of the intelligent may be a kind of ‘listening-for’ similar to what is described in the opening epigraph.³ There, sound artist Salomé Voegelin laments that listening to music often amounts to the translation of its content into the visual representation of notes on a page, signs of abstract generic categories outside of the domain of sound itself. Likewise in the *Timaeus*, sonic material might be the kinetic cause that kicks off the game of ‘listening-for,’ but only the thoughts attending the object of listening—numbers, Ideal Forms, immaterial intelligibles, etc.—cause delight.

It has been a matter of some anxiety not only to me, but to other commentators such as Andrew Barker and Francesco Pelosi, that such a reading of the passage does not ascribe an important causal role to the sounding material in the experience of delight.⁴ As historians of music and musicians ourselves, it is perhaps a matter of personal vindication that we feel compelled to defend sonic experience in the material and perceptual realms. Whether from timocratic love of honor or in defiance of the philosopher of *Republic V* who might see us as foolish “lovers of sights and sounds,” I admit that it would be gratifying if the intelligent of *Sob* took delight in the raw stuff of music. And I surmise that, for many commentators, a motivation for scanning the Platonic corpus for references to music might be to explicate and elevate aesthetic experiences we ourselves have had. I certainly have not escaped the guilty pleasure of associating myself and my own musical experiences with the intelligent rather than the fools. Quite apart from this temptation, the very act of looking for a theory of music and hearing in the *Timaeus* will be riven with difficulties. Music, sounding consonance, and hearing are indeed parts of the shimmering *kosmos* constructed in the *Timaeus* before our minds’ eyes. However, once one starts to write about music in the *Timaeus*, it might appear that the *Timaeus* is a text principally *about* music.

3 Taylor 1962, 577–78.

4 Both Barker’s and Pelosi’s exegeses have been helpful to me in crystallizing my thoughts about sound, hearing, and consonance in the *Timaeus*. See especially Pelosi 2010 and Barker 2000. General discussions of perception and ethics in the *Timaeus* to which I have had recourse are Wolfsdorf 2014, Lorenz 2012, and Carone 2005.

Despite the methodological booby-traps, I will nevertheless strive to write about consonance and hearing in the *Timaeus* from the perspective not of a musicologist or musician, but rather of a soul in the Timaeian universe aiming for the good and oriented towards truth, whatever that might entail for sonic experience. From this perspective, my questions for this paper are:

1. How are pleasure (ἡδονή) or delight (εὐφροσύνη) produced in listening to concord?
2. How may an agent aim for delight; and
3. Is pleasure to be avoided?

Answers to these questions require an understanding of both the mechanics of perception and its position within the larger teleological picture of the *Timaeus*. To these ends, I will first sketch in Part I a general picture of the ethical framework of Plato's *Timaeus* and an account of perception within this framework. There I will suggest that pleasure in acoustical material is taken by the mortal soul as a response to physical interactions between the sense of hearing and its objects. Part II will then address the specific perceptual act of hearing concords and the mechanisms of pleasure in this perception. In this section I will argue that pleasure taken in consonance is rooted in the body and belongs to both the fool and to the wise. This pleasure may serve as an auxiliary cause to becoming intelligent and hence need not be avoided. Finally, in Part III, I consider the causes of delight in the intelligent which distinguish them from fools. Delight results from correct perception of consonance insofar as the transmission of these sensory stimuli is cognized by the rational soul as a mimesis of Divine Harmony.

I

Overview: Perception and Virtue

As Timaeus's story goes, human souls begin as rational intelligences created of like material and in like manner to the soul of the *kosmos*. Like the World Soul, humans possess two main soul orbits, the orbit of the Same and the orbit of the Different, which cognize intelligible and perceptible things respectively (37a-c, 43d-44b). The human soul's orbits have been constructed in harmonic proportions analogous to those of the World Soul: namely, in double and triple intervals and the ratios (3:2, 4:3, and 9:8) that connect them. Through the well-ordered motions of these orbits, a rational soul produces knowledge and true opinion. Despite their excellent construction, when these rational souls are sown into mortal bodies, the movements of growth, nourishment, and

the violent sensations of external objects disrupt the orderly motion of the orbits, savagely impairing cognition (43d-3). Deprived of both knowledge and true opinion, the soul can grasp neither Being nor Becoming and thus cannot make judgments about what is truly beneficial to itself. Amazingly, within this psychic pandemonium lie the seeds of virtue: if we can master the disruptive motions deriving from embodiment, we will live justly; if we are mastered by them, we will be unjust (42a3-b2).⁵

In order to help embodied souls along the path of virtue by mitigating the harmful effects of the “dreadful and necessary disturbances” resulting from embodiment, the gods build a mortal soul to contain them (69c7-d1). By placing the rational soul in the head (44d3-5), the spirited soul between the midriff and the neck (70a3), and the appetitive soul in the lower part of the body, near the liver (70e-71e), the rational soul is spatially and functionally protected from the disturbing motions contained in the mortal parts of the soul. The rational soul contains the cognitive faculties of understanding (νόσις), which grasps Being by means of reason (λόγος, 28a1-2), and opinion (δόξα), which grasps Becoming by means of irrational sense perception (μετ’ αἰσθήσεως ἀλόγου, 28a2). The appetitive part of the soul on the other hand has no share in opinion (δόξης), reasoning (λογισμοῦ), or understanding (νοῦ), but partakes in pleasant and painful sensation and desire (77b5-6). Finally, the spirited part of the soul acts as an intermediary between these two, listening to the commands of reason and restraining the appetitive soul (70b).

This tripartition of the soul within the body, while a great help to the rational soul, is not sufficient to protect it completely. A rational soul begins to regain its intended form only when the stream of growth slows, allowing the orbits of the soul to seek peace (γαλήνη) and to gradually stabilize (καθιστώνται) with the passage of time. This, we are told, renders the individual intelligent, (ἔμφορων).⁶ Establishment of these stable orbits demands proper nurture, education, and knowledge of the well-ordered *kosmos*:

We should set right the revolutions (περιόδους) in our heads that were thrown off course at our birth, by coming to learn the harmonies and revolutions of the universe (τάς τοῦ παντός ἀρμονίας τε καὶ περιφοράς), and so make our faculty of understanding like to its objects (τῷ κατανοοουμένῳ

5 ὅποτε δὴ σώμασιν ἐμφυτευθεῖεν ἐξ ἀνάγκης, καὶ τὸ μὲν προσίοι, τὸ δ’ ἀπίοι τοῦ σώματος αὐτῶν, πρῶτον μὲν αἰσθησιν ἀναγκαῖον εἶη μίαν πᾶσιν ἐκ βιαίων παθημάτων σύμφυτον γίγνεσθαι, δεύτερον δὲ ἡδονῇ καὶ λύπῃ μεμεγμένον ἔρωτα, πρὸς δὲ τούτοις φόβον καὶ θυμὸν ὅσα τε ἐπόμενα αὐτοῖς καὶ ὅποσα ἐναντίως πέφυκε διεστηκότα: ὧν εἰ μὲν κρατήσοιεν, δίκην βιώσονται, κρατηθέντες δὲ ἀδίκαια. (42a3-b2).

6 44b1-7.

τὸ καταννοῦν ἑξομοιωσαί) in accordance with its original nature. And when this likeness is complete, we shall have achieved our goal: that most excellent life set forth for humankind by the gods, both at present and for the rest of time. (90d1-6)

Timaeus tells us that the gods have given the senses of sight and of hearing to us so that humans might have access to this knowledge—that is, the harmonies and revolutions of the universe. Sight allows the revolutions of the stars and sun to be observed; hearing makes possible speech and music (ἁρμονία).⁷ The perception of these objects instigates the eventual realization of the human soul's psychological isomorphism with the World Soul. While some perceptions brutally disorder the soul's orbits, good perceptions, namely those right perceptions of ordered objects of sight and hearing, may be a lighthouse (or foghorn) of salvation.

Sounding music is thus ethically valuable within the Timaeian universe, but its value is nevertheless qualified: ethical benefit from sounding ἁρμονία is contingent upon its proper use (47d1-d6). Harmony is a gift of the Muses for one who makes use of understanding (τῷ μετὰ νοῦ προσχωμένῳ). It has not been given for the sake of irrational pleasure (οὐκ ἐφ' ἡδονὴν ἄλογον) but rather as an ally in bringing our soul orbits into order and making the soul concordant with itself (ἐπὶ τὴν γεγонуῖαν ἐν ἡμῖν ἀνάρμοστον ψυχῆς περίοδον εἰς κατακόσμησιν καὶ συμφωνίαν ἑαυτῇ σύμμαχος ὑπὸ Μουσῶν δέδοται). Merely perceiving sounding harmony is not sufficient for re-establishing the orbits of our rational soul, for perception of this material *not* guided by understanding will result merely in pleasure, like that of the fools in 80b.⁸ As we will see in Part II, this kind of pleasure has causes rooted in the body, and hence belongs to the mortal soul.

The Senses, Perception, and Pleasure

In the *Timaeus*, perceptions (αἰσθήσεις) are movements originating both outside and inside the body that are passed along until they arrive at the center of intelligence (φρόνιμον).⁹ Timaeus thus seems to suggest that the rational

⁷ 47c4-d6.

⁸ Plato seems to be talking about music here, rather than the perception of pure consonances as in 80b. However, the failure on the part of those listening for pleasure seems a similar complaint as that which appears at 80b: neither the pleasure seeker in 47d nor the fool of 80b make appropriate use of their rational capacities.

⁹ Internal αἰσθήσεις (proprioception) is associated with nourishment (43b5, 70e4), sexual desires (86d2-4, 91b4-d4), and distress or imbalance of the body (84d1-2) while αἰσθήσεις of externals (exteroception) relies upon the five senses sight, hearing, smell, taste, and touch.

soul must ultimately register the transmission, or else the movement does not count as a perception. However, this need not specify whether or not the rational soul is the initial site of contact of the stimulus with the soul, rather than another soul part. Timaeus tells us that those sense organs that are composed of easily moved materials (fire and air) will transmit disturbances with very little force, while other parts of the body composed of heavier materials (water and earth) require much greater force to pass along a disturbance and so be registered as a perception. Pleasure or pain of the body often attends perception: an unnatural disturbance that comes with great force and intensity is painful, while its departure or dissipation, leading back to a natural state, is pleasant (64c7-d2). Furthermore, a disturbance must be great enough to be perceived (mild and gradual disturbances are not perceived), and great pleasures (μεγίστας) arise in the mortal part of the soul (τῷ θνητῷ τῆς ψυχῆς) when departures from their normal states are unperceived, but their replenishments are intense and substantial (65a3-6). I take it that while the ultimate terminus of the sense stimulus is the rational soul, the pain or pleasure resulting from bodily depletion or replenishments is experienced by the mortal soul—the part of the soul built to contain pleasant and painful perception.

The pain or pleasure attending a perception is correlated to the size of elementary particle involved in the perception. Perception involving the heavier elemental bodies readily gives rise to pleasure or pain localized in the sense organ itself (e.g. the pleasure or pain of touch or taste are felt on the skin or on the tongue). By this I understand that the mortal soul is the site of these pleasures, but as pleasure or pain of a particular organ. Conversely, the two senses that involve the lightest elementary particles do not involve localized pleasure or pain. In the sense of sight, for example, Timaeus avers that the return to a natural state does *not* yield pleasures in the eye itself (or more precisely, the ray of sight) because the elemental bodies are too small to be perceived as a replenishment to that sense organ (64d8-e1). Timaeus intends for us to understand hearing, the second-most subtle sense, to function in the same manner. We do not take pleasure or pain in the organ of hearing when we perceive acoustic material.

Now we might find it surprising for Timaeus to suggest that localized pain or pleasure could not result from sight or hearing. Indeed, this simply does

Many other commentators have likewise noted that the use of φρόνιμον at 64b5 instead of ψυχή seems to indicate the rational soul as the terminus of motion for αἰσθησις. Pelosi 2010, 98; Wolfsdorf 2014, 127; Carpenter 2008, 44. For an alternative explanation of perceiving subject in which all soul parts are termini of sensory stimuli dispersed throughout the body, see Lorenz 2013, 242.

not match phenomena we all experience. Most of us have experienced light that is too bright or intense, resulting in pain to our eyes; similarly, we have all been subjected to noises that are perceived as painful in volume or timbre.¹⁰ Such examples would seem to be caused by the same mechanisms as the pain which can be suffered by the organs of taste or touch: unnatural and violent disturbances incur some amount of damage upon the organs of those senses.¹¹ The difference between the localized pains of these two senses and the localized pains of the other sense organs, however, is that whereas it is typical for pleasure and pain to occur in the sense organ for the grosser senses, the pains associated with the subtler senses are exceptional.

I propose that Timaeus has another type of pleasure and pain in mind which may accompany visual and auditory perceptions under standard conditions: this is a group of pleasures and pains experienced nonlocally by the mortal soul, not in the organs of sight or hearing. When gazing at a particularly nice painting, for example, most of us don't report tingles of pleasure in our eyes. We may, however, describe the experience of eating a great piece of pie as "mouth-watering."¹² In the former case, Timaeus could say that the pleasure accompanying the visual perception occurred at the soul; the pleasure of the gustatory perception on the other hand was perceived locally at the tongue. While Timaeus himself does not describe non-localized aesthetic pleasure as a distinct category of pleasure in his principal explication of perception and pleasure (64a2-65b3), I hope to show that this distinction might be inferred from other descriptions of pleasure and pain elsewhere in the *Timaeus*.

Auditory Perception

Let's turn directly to Timaeus's description of hearing:

In general, let us say that sound (φωνήν) is the percussion of air through the ears upon the brain and the blood and transmitted to the soul (τὴν δι' ὧτων ὑπ' ἑτέρου ἐγκεφάλου τε καὶ αἵματος μέχρι ψυχῆς πληγὴν διαδιδόμενην), and that hearing (ἀκοήν) is the motion caused by it (τὴν δὲ ὑπ' αὐτῆς κίνησιν) that begins in the head and ends at the seat of the liver. And let us take it that whenever the percussion is rapid, the sound is high-pitched, and that the slower the percussion, the lower the pitch. A proportion-

10 Cf. *DA* 424a29-32.

11 This will be discussed in greater detail in Part II.

12 It is interesting to note here, by way of an exception that proves the rule, that in modern English usage visual decadence and enjoyment are often described through the modality of taste: e.g. "eye candy" or "feast for the eyes."

ate (ὁμοίαν) percussion produces a uniform, smooth sound (ὁμαλήν τε καὶ λείαν), while a contrary one produces one that is rough (τραχεῖαν). A forceful percussion produces a loud sound, while a contrary one produces one that is soft. (67a7-c1)

This model of hearing has been explained by Andrew Barker as involving two motions.¹³ In Barker's explication of this passage, the antecedent of the ambiguous "it" causing the motion (ὕπ' αὐτῆς) is the soul (ψυχῆς).¹⁴ Sound (φωνή) constitutes the motion caused by the percussion of the brain and the blood up until the rational soul; hearing (ἀκοή) on the other hand is a secondary motion sent by the rational soul down through the body to the seat of the appetitive soul, the liver. This reading gives us an explanation of why hearing has its starting point in the head, and shows how the rational soul has access to sense stimuli. However, Barker's model cannot explain why the disorder of the rational soul on the one hand prevents cognition, but does not impair the transmission of perception: when Timaeus tells us that an adult who is mad cannot "see or hear anything right" (86c2) I do not take it that this man does not see or hear anything at all. Rather, this person makes faulty judgments about *what* he does see and hear. In short, not to "see or hear anything right" is to see and hear everything wrong, not to see and hear nothing. Were the transmission of perception a motion originating in the rational soul, one would expect failures of transmitting perception to accompany failures of cognition.

Another potential deficiency of Barker's model is that it obscures what physically constitutes ἀκοή. For the other sense modalities, we see that each modality corresponds to appropriate elemental types: e.g. external fire affects the ray of sight; earth parts affect the flesh of the tongue (45b-c, 65c). For Timaeus's theory of hearing, we should expect to be able to locate where and how aery particles affect like particles at the sense organ. If hearing is really just a transmission from brain to liver, where and what is the instrument of sense?

It seems to me that some of these difficulties may be ameliorated by taking Timaeus as offering a one-motion theory of transmission, where the antecedent of ὕπ' αὐτῆς is the percussion (πληγῆ). I take the bipartite structure of the definition to distinguish the object of hearing from the sensation of hearing. While the percussion of air upon the brain and blood specifies the object of hearing, the motion of the percussion from the head to the liver specifies the area of the body affected by the percussion. The motion of the percussion

13 Barker 2000, 87. Barker's model is also adopted in Pelosi 2005, 162.

14 Barker 1989 likewise proposes a two-motion model, though here he does not insist upon ψυχῆς as antecedent for αὐτῆς. 61-62, n. 30.

delimits the sense organ. “Hearing” is not actually in the ears, just as “sight” is not actually in the eyeballs. In the former case, hearing occurs internally, in the latter case, vision arises through an external ray of sight composed of fire. This model does not depend on the good cognition of the rational soul in order for sensory stimuli to reach the mortal soul; auditory stimuli may reach the mortal soul without the attention of the rational soul. It also allows us to determine air as the elemental body which corresponds to the sense of hearing. The significance of this will be explored in Part II in the context of cyclic replacement.

In each of the senses, variations in the sensed objects (elemental particles) correspond to phenomenal variants (the perception of qualities).¹⁵ The type of interaction that takes place between the sensed objects and the sense organ itself, interactions which in turn correspond to phenomenal variations in the quality of the perception, depends on the properties of the object of sense. These types of interactions between objects and organ include abrasion, smoothing, contraction, or dilation of the sense organ, which are variously destructive or restorative of the organ. For example, when earth particles that are congruent to the natural condition of the tongue (οἰκεία τῇ τῆς γλώττης) enter the vessels of the tongue, they smooth (λεαίνῃ) the roughened parts (τὰ τραχυθέντα), restoring the tongue to its natural condition. These are perceived as sweet (γλυκύ). When, on the other hand, earth parts do violence to the tongue through their roughness (τραχύνοντα), bitterness is perceived as the tongue contracts (65b4-66c7). In the most subtle sense, vision, the dilation of the visual stream results in the appearance of white; its contraction results in the appearance of black.¹⁶ If we perceive the variants of hearing through processes analogous to the other senses, then sonic qualities are also perceived because of physical interactions between the object of hearing and the organ of hearing. It seems to me that proportionate (ὁμοιάν) sounds that appear uniform and smooth (ὁμαλὴν τε καὶ λείαν) would have an effect on hearing similar to the effect that certain particles have on the tongue when they smooth it.¹⁷ These sorts of proportionate sounds would have a restorative effect upon

15 Thanks to Charles Brittain for helping me formulate my ideas in this section more clearly.

16 τὰ δὲ μείζω καὶ ἐλάττω, τὰ μὲν συγκρίνοντα, τὰ δὲ διακρίνοντα αὐτήν, τοῖς περὶ τὴν σάρκα θερμοῖς καὶ ψυχροῖς καὶ τοῖς περὶ τὴν γλώτταν στρυφνοῖς, καὶ ὅσα θερμαντικά ὄντα δριμύα ἐκαλέσαμεν, ἀδελφὰ εἶναι, τὰ τε λευκὰ καὶ τὰ μέλανα, ἐκείνων παθήματα γεγονότα ἐν ἄλλῳ γένει τὰ αὐτά, φανταζόμενα δὲ ἄλλα διὰ ταύτας τὰς αἰτίας. (67d5-e4).

17 It has been often remarked that the account of sound at 67a-c resembles that of Archytas, fragment 1; see commentary in Barker 1989, 39-40 and Huffman 2005, 103-161. If, as seems reasonable, we take a sound in the *Timaeus* to be comprised of a series of projectiles, we can take a “like” (ὁμοιάν) percussion as proportionate in the relationship of its constituent projectiles to one another.

the sense organ, while sounds that are rough (τραχείαν) do violence to the sense organ.

Because the interactions between sense object and sense organ may damage or restore a given sense, pleasure or pain may accompany the perception of qualities. In taste, those particles perceived as sweet are likewise perceived as pleasant and agreeable (ἡδύ καὶ προσφιλές) since the particles restore the tongue to its natural condition. In smell, sense objects that roughen and assault (τραχύνόν τε καὶ βιαζόμενον) the area between the head and the navel are painful; those that mollify it (καταπραύνον) are pleasant (67a3-6). Because these are senses involving heavier elements than those of vision or hearing, these pleasures or pains occur at the tongue for taste and in the region between the head and navel for smell. However, for the subtler senses of hearing and vision, we have seen that pleasure or pain will not normally occur in the sense organ.

Instead, I argue, pleasure or pain in the variations of the objects of hearing and vision are perceived at the mortal soul, though the cause for these pleasures and pain (as in the grosser senses) is tied to interactions with the sense organ itself which are, respectively, restorative or destructive. We can locate an example of this kind of pleasure in the mortal soul's innate and irrational love of certain colors and bright, shiny things. In its natural condition, the liver is smooth (λείον), bright (λάμπρον), and sweet (γλύκυ), qualities experienced by the mortal soul as pleasant and agreeable.¹⁸ When the rational soul wishes to frighten or lure the mortal soul into obedience, it sends down thoughts from the brain (the domain of the rational soul) to be reflected in the smooth and bright surface of liver (the domain of the mortal, appetitive soul). For, we are told, since the mortal soul is "bewitched by images and phantoms night and day" (ὕπὸ δὲ εἰδώλων καὶ φαντασμάτων νυκτός τε καὶ μεθ' ἡμέραν μάλιστα ψυχαγωγῆσιν), the thoughts of the rational soul reflected in the mirror of the liver as images can frighten or please it.¹⁹ When the mortal soul is to be threatened, bilious colors (χολώδη χρώματα) are painted upon the surface of the liver. Bilious color, a property caused by the contraction of the sense organ, leads to

18 We have seen pleasure associated with sweetness and smoothness in the previous examples. Brightness, by association, I take as another quality liked by the mortal soul. Further evidence for this appears in Part II of this paper.

19 I do not take this passage to suggest that the appetitive soul *requires* the rational soul to perceive images; that is, I do not believe this is evidence that the rational soul must 'pre-process' perceptual stimuli as images of things before the appetitive soul can access them. The appetitive soul must have a rudimentary cognition of images, otherwise it could not be frightened by them. For a discussion of the appetitive soul's capacities for understanding see Lorenz 2014.

a perceived pain. It seems to me plausible then that the smooth and uniform sounds which restore the organ of hearing (e.g. by making the body of air move in calm way again), will be perceived by the mortal soul as aesthetically pleasurable. This, I will argue in the next section, is the kind of pleasure belonging to fools in their perception of concords.

II

The Perception of Concords

We should investigate all sounds (φθόγγοι), whether fast or slow—sounds that appear to us as high pitched or low. On the one hand, sometimes they are inharmonious (ἀνάρμοστοι) on account of the dissimilarity (ἀνομοιότητα) of the motion caused by them in us as they move towards us. On the other hand, sometimes they are harmonious (σύμφωνοι) on account of their proportionality (ὁμοιότητα). For the slower sounds catch up (καταλαμβάνουσιν) to the motions of the earlier and swifter ones which have already desisted and arrived at congruency (ἀποπαυομένας ἤδη τε εἰς ὅμοιον ἐληλυθίας). To these motions those [slower] sounds, by adding their motions, move the former [faster] ones. But in catching up, the [slower] sounds do not disturb them by throwing in a different motion (ἀνετάραξαν κίνησιν). Rather, by attaching the beginning of a slower motion in accordance with the likeness of the swifter motion, now slowing down, they blend one single sensation from high and low (μία ἐξ ὀξείας καὶ βαρείας συνεκέρασαντο πάθην). Hence the pleasure they bring to fools and the delight they afford to the intelligent on account of the mimesis of divine harmony born in mortal movement. (80a3-b8)

Timaeus's explanation of consonances comes about in a section of the dialogue devoted to explaining a theory of cyclical replacement. Because there is no void in the Timaeian universe, motion must be explained by a recirculation of matter. As material moves away from a given location, it is simultaneously replaced by other material that takes its place. Breathing relies on this principle, as does medical cupping, projectiles, water currents, and the attraction of amber and loadstone (80c). Now in order to understand hearing as an example of this process, we should be able to identify what material is being moved and simultaneously replaced. Since the explanation of consonance immediately follows a thorough explanation of the movement of air in breathing, and since we have been told that air is hearing's power (δύναμις), I take air as the recir-

culated material.²⁰ If this is right, then we may understand the movement of hearing, caused by the percussion of the brain and blood and reaching as far as the liver, as constituted by moving particles of air.²¹ Air within the body, triggered by the percussion of the brain and blood, moves and is simultaneously replaced in a cycle that stretches from the head to the liver. Peering into the body of a perceiver of a single sound in the *Timaeus* with 'Demiurgic vision,' we would see an orbit of air whose speed determines the perceived pitch. Concords are a variation of this process. Although the mathematics of the correspondence between the faster and slower motions is fraught and has been much contested in the literature, the salient detail that concerns us here is that if multiple motions share a proportionality (ὁμοιότης) of speed, we perceive these orbits as a single, unified affection, consonance.²²

We have seen in *Timaeus*'s general explanation of hearing and sound that a single sound which is proportionate (ὁμοίαν) is perceived as smooth and uniform (47c4-d7). I suggest that consonance is perceived through analogous operations in the body which hinge upon like motion. While the percussion of a *single* perceived sound is proportionate (ὁμοίαν) through the relationship of the constituent air projectiles to each other, the proportionality (ὁμοιότης) of two sounds constitutes the proportionate relationship of the *set* of air projectiles to one another. As I have argued in the last section, a proportionate percussion of a single sound is perceived as smooth and pleasant because it restores the sense of hearing through its regular motion. I suggest that consonance is a compound occurrence of a proportionate percussion. The individual motions must be proportionate in order to be heard as even pitches, and the set of motions must be like to each other to avoid turbulence of conflicting motion. This compatible set of motions will restore the sense of

20 64c7.

21 Onians takes sound in the *Timaeus* as a movement extending from the head to the liver as perhaps "a relic of the beliefs . . . that sound was breathed in through the ears to the ὄρυς in the chest and that breath reached the liver." Onians 1951, 65.

22 *Timaeus*' explanation of the process of slowing down, catching up, and grafting on of the two sets of motions is underdescribed by Plato and has not, in my opinion, seen convincing explication. I use "proportionate" in this context without intent of proposing a solution to the problem; rather, it is used simply to denote a relationship of likeness and compatibility that is definable through mathematical ratios. This relationship allows for multiple motions to be non-disruptive to the sense of hearing. I remain agnostic as to whether or not the speed of the slower, lower sound is in a 1:1 proportion to that of the dying-away sound upon impact, or whether it stands in multiple or epimoric ratio (for example). For commentary on this problem see Archer-Hind, 1973 300-301 n.2; Barker 1989 62-63, Cornford 319-326, Taylor 575-578.

hearing. Conversely, sounds that are unlike will be perceived as unharmonious on account of damage done to the sense of hearing. If I have correctly identified the material circulated in cyclical replacement, we will have better means for explaining the return of hearing to its natural state. Hearing involves the motion of air which extends from the head to liver; the restoration of hearing would consequently occur in this body of air.

The channels (φλέβαι) in which this takes place might be those indicated in 77d8-e6. The channels of the head are diverted left-to-right and right-to-left across the head and down toward the rest of the body to act as a fastener and “to make sure that the stimulations received by the senses, coming from either side of the parts [of the head] might register clearly upon the body as a whole.”²³ The air in these channels would then be affected by processes of abrasion, smoothing, contraction, or dilation resulting from variant percussions. Such processes would be accompanied by pleasures or pains of the mortal soul.

Evidence of the non-localized aesthetic pleasure of hearing experienced by the mortal soul seems to me to be confirmed in the punchline of the discourse on consonance: the perception of concords results in pleasure for fools. Sounds that are *not* like each other are those in which the slower motions catching up to the faster do throw in an unlike and disruptive motion. That is, the sense of hearing undergoes incompatible and warring motions. This surely would be perceived as rough, not smooth, and therefore aesthetically disagreeable to the mortal soul.

We may now say that the cause of the fool's pleasure is the restoration of her sense of hearing through like sense stimuli.²⁴ However, Timaeus gives us no reason to think that the bodily processes of perception up to the center of intelligence (φρόνιμον) are not identical for the fool and for the wise. This would then entail that *all* embodied souls, if in physical working order, should experience the perception of consonance together with pleasure at the mortal soul. This pleasure is not depicted as bad in itself. Rather, I suggest, pleasure may act as motivation for the unintelligent to ascend towards intelligence.

When we are told that the fool's pleasure and the delight of the wise are caused by the mimesis of divine harmony born in mortal movements (ᾄδονήν μὲν τοῖς ἄφροσιν, εὐφροσύνην δὲ τοῖς ἔμφροσιν διὰ τὴν τῆς θείας ἁρμονίας μίμησιν ἐν θνηταῖς γενομένην φοραῖς παρέσχον), we may take the mimesis as the

²³ 77d6-e6.

²⁴ Pace Pelosi 2010, 97. “Not only is it difficult to understand the *hēdonē* in *Tim.* 80b5 as a pleasure of the body, but there is also doubt that it is a pleasure that can be traced to the sphere of sensibility, i.e. of the senses and the mortal soul.”

cause of both the pleasure and the delight: Were we to continue to observe a perceiver of consonance with Demiurgic vision, we would see that the moving image of consonance in the body would be analogous to movements of the celestial bodies in the heaven. Perception of (pleasant) concord, in which the body and parts of the soul are moved by proportionate motions, physiologically instantiates an image of the celestial harmony inside the human. That is, the perception of concord *is* a physical imitation of the well-ordered heavens. Indeed, the language used to describe the perception of concords echoes a description of the heavens earlier in the *Timaeus*: the motions of the slow sounds that in 80a “catch up to” (καταλαμβάνουσι) the faster ones are a mortal image of the immortal choreography of the astronomical bodies which in 38d4-5 “catch up and are caught up to” (καταλαμβάνουσιν τε καὶ καταλαμβάνονται). Mimesis of the celestial bodies is thus present at the level of the body for both the fool and the wise. We will address how the intelligent are distinguished from fools through their further access to mimesis of divine harmony in Part III.

Earlier in the dialogue we are told that these celestial bodies were crafted by the Demiurge himself as exceedingly beautiful (χάλλιστον) and shining (λαμπρότατον), the most perfect material bodies of the *kosmos*, endowed with soul and embroidered in color (πεποικιλμένον) across the night sky (40a2-6). It can hardly be a coincidence that the external bodies most essential for human ethical progress in the *Timaeus* superlatively exhibit those visual qualities in which the mortal soul takes irrational glee: attractive colors and shininess. In *Republic VIII* the soul's irrational magpie-like affinity is marked as dangerous to the political stability of the state: those with the impoverished intelligence of women and children (presumably not women of the ideal state!) impulsively pick a type of governance that appears the most beautiful, one colorfully embroidered (πεποικιλμένη) with all sorts of characters (ἡθρα).²⁵ In the *Timaeus*, however, the heavenly bodies which *appear* most beautiful in all their shiny splendor, *are* indeed truly beautiful. This seems to me to apply to consonances as well. What appears as aesthetically enjoyable to the mortal soul—in this case, auditory smoothness—turns out to be actually beautiful.²⁶

25 557c5-8. For an interesting discussion of ποικιλία and other visual descriptions of sound in the New Music see LeVen (2013).

26 Plato comes at this idea from a different angle in another late dialogue, the *Philebus*. Though in this dialogue he tackles pleasures from a phenomenological perspective, his account of “pure pleasures” is congruent with this interpretation of the *Timaeus*. These pure pleasures are based on imperceptible and painless lacks, while their fulfillments are perceptible and pleasant (51b). Examples of these pure pleasures are well-constructed

It seems reasonable then to think that taking aesthetic pleasure in the appropriate objects of perception need not be avoided by the individual aiming for the good. Not only is this pleasure probably unavoidable as an embodied soul, but these objects are innately liked by the mortal soul so as to prompt us to realign our souls. Pleasure, when taken in the right objects, can be an auxiliary cause to virtue: pleasure may motivate the perceiver to investigate the real causes behind the perception and the pleasure.

III

Understanding and Delight

I have proposed a reading of the Timaeon account of the perception of consonance in which the pleasure of the mortal soul is rooted in the mechanics of sensation in the body. For some perceptions (like the movements of the shiny planets and the smooth sound of consonances), the irrational predilection of the mortal soul for these pleasant properties is congruent with the objects' real beauty. While a complete fool engages no further with the sonic material than being passively affected, we know that the intelligent individual would make use of the rational soul's active powers, meaning it would employ its capacities in judging with respect to what the perception is similar or dissimilar, in what manner, and how.²⁷ But here we have come full circle: does playing the game of 'what interval is this' alluded to in the beginning epigraph get us to delight? And even if we think that the activity of the mind must require higher-level

shapes, colors, and sound; these are beautiful (καλά) not in relation to anything, but in themselves (51c). Pure pleasures of hearing involve pure notes (καθαρόν μέλος) composed of sounds both smooth (λείας) and bright (λάμπρας).

- 27 It may be the case that in Timaeus' model of perception, even the greatest human fool must make some judgments in order for the sensory stimuli to be processed as perception by the rational soul. If in order to count as perception, the motions of the stimulus must reach the φρόνιμον; and if the affection of the φρόνιμον entails cognition (see the perception in the World Soul at 37b-c); then the fool will engage in cognition upon the transmission of motions from the senses. However, Timaeus does not seem to suggest anywhere in this dialogue that these motions must be correctly cognized in order to be perceived as pleasant. For instance, in the case of the "mad" sexually-indulgent man in 86c, it does not seem to be the case that he is experiencing pleasure where there is none: the overabundance of seed and corrupt condition of the body which gives rise to intense depletions and fulfillments is described to be the cause of the pleasure (and of the man's ethical state). The man is described as incapable of rational thought and as unable to even "hear or see anything right"; however, there is nothing to suggest that the pleasures are not actually pleasant in the somatic sense outlined in the dialogue.

thoughts than interval recognition, would the presence of sounding material be required? Few of us would insist that whipping out our monochords and vamping on perfect consonances as we read the passages on sound and hearing in the *Timaeus* is required for thinking about sound and its relation to the *kosmos*. But can this silent contemplation give rise to delight (εὐφροσύνη) of 80b?

To address this question, it is helpful to turn to the various usages of εὐφροσύνη and related forms in the Platonic corpus.²⁸ All uses indicate an experience that is related in some way to the intellect and is more than a localized pleasure of the body. It is often used to describe the experience of gods and god-like men, though at the same time the objects which induce εὐφροσύνη in many cases do not seem to be Intelligible Forms themselves. In the *Timaeus*, the other prominent usage of εὐφροσύνη is at 37c7 when the Demiurge observes his creation:

Now when the Father who had begotten the universe observed it set in motion and alive, a thing that had come to be as a shrine for the everlasting gods, he was well pleased, and in his delight (εὐφρανθείς) he thought of making it more like its model still (37c6-d1).²⁹

Here the Demiurge delights in having created the material universe. Likewise in the *Laws*, Athena is said to take delight in the play of the dance (εὐφρανθείσα τῇ χορείας παιδιᾷ), in a passage in which it is clear that she herself is participating in the dance (796b). In these cases, and in other cases within the Platonic corpus in which sensory material seems to be the object of delight, such material is well-proportioned and constructed in modeling relationships to intelligibles. What is common to the Demiurge, Athena, and the intelligent listener is that they all make proper judgments about material in the sensory realm. While we do not know how the Demiurge has access to the material, we know of course that for humans, access is through perception. In the intelligent, not only are the sensory stimuli transmitted to the rational soul (as is the case with the fool), but the affection is followed by an appropriate motion of the rational soul which produces a correct cognition of how the affection was caused.³⁰

28 David Wolfsdorf is mistaken that forms of εὐφροσύνη outside of *Tim.* 80b5-8 occur only in *Prt.* 337c1-4 and *Cra.* 419d4-9. My search has returned the following other instances: *Laws* 657 e3, 739d7, 796 b6, *Symp.* 206 d4, *Theaet.* 144 c5, *Tim.* 37c6-d1, *Men.* 237a3, *Def.* 413 e2 (sp).

29 Ὡς δὲ κινήθην αὐτὸ καὶ ζῶν ἐνόησεν τῶν αἰδίων θεῶν γεγονὸς ἄγαλμα ὁ γεννήσας πατήρ, ἡγάσθη τε καὶ εὐφρανθείς ἔτι δὴ μᾶλλον ὅμοιον πρὸς τὸ παράδειγμα ἐπενόησεν ἀπεργάσθαι.

30 We might compare Prodicus' definition of taking delight (εὐφραίνεσθαι) in *Prot.* 3371-2 in which delight is taken through participating in intellectual activity, but pleasure has to do with the body.

When the Demiurge takes delight in viewing his visible, perceptible universe as an image of the intelligible blueprint, he understands the causes whereby the perceptible universe was formed in its image. Athena takes delight in the dance, presumably as a manifestation in space and time of shape and proportion. And the intelligent, I think, take delight in perceiving concords as the proportions of the World Soul and divine ἁρμονία sounding through the interaction of raw matter and embodied soul. In other words, the intelligent are able to connect the internal motions of the sensory stimulus to organized motions external to themselves, and to understand that these motions in turn are caused by a mimesis of divine harmony. Without the presence of sensory material, this particular configuration of causal relations would not be accessible. We might even think that the transmission of the motions experienced as pleasant by the mortal soul is necessary for a complete and correct perception. Without cognition of pleasure as caused by the good order of the body in the universe, we have failed to correctly view the pervasive influence of the Demiurge in his creation.³¹

I'd like to dwell on the creative aspects of the three examples above for a moment: the Demiurge, Athena, and the intelligent are apprehending organized matter that did not by necessity have to be ordered. The dark side of the *Timaeus* is the domain of the straying cause (πλανωμένη αἰτία)—the chaotic and god-forsaken (ἅπαν ὅταν ἀπῇ τινος θεός) realm of matter (53b3). It is this unlikely and unseemly realm that the Demiurge persuaded into proportion. In each of our three examples, the organized objects of perception are crafted out of this unseemly matter by intellect. It is evident that both the Demiurge and Athena have participated in the creative authorship of the objects that they now perceive with delight. But we might also ask in the case of consonance, who or what creates sounding order from unruly material?

Though this is not mentioned by *Timaeus*, I think it is not unreasonable to suppose that the creators of the sounding consonances are in fact human beings. Just as the Demiurge has entrusted the gods to organize matter and soul, human beings likewise are given the ethical task of organizing their own matter and restoring the soul's natural order by imitating the craftsmanship of the Demiurge and the gods. If the delight of the Demiurge is any kind of analog for the intelligent, the apprehension of the well-ordered *kosmos* does not aim to use sensory material as a mere springboard to the intelligible. Rather, delight

31 From the external perspective of the Demiurge (what I have called "Demiurgic vision" in this paper), delight would amount to the pleasure of the mortal soul, with the addition of the positive experience of the immortal soul taken in cognizing the sensory transmission.

might constitute a deep appreciation, even a kind of awe, for the unlikely beauty that has been created out of the most mundane materials.³² The particular delight of consonances comes in recognizing that they have been fashioned through the discoveries and skill of struggling human souls.³³

If we take the Demiurge's perception of the *kosmos* as the model towards which we aspire as intelligent individuals, we realize that the scope of the knowledge necessary to understand just what a consonance is cannot simply be garnered from learning the rudiments of harmonics. Nor is it knowledge we can access through the sensory modality of hearing alone. To be sure, it seems we need to know that consonances result from proportions, but to recognize that they are the *same* proportions as those of the heavens requires visual perception and the observations of astronomy. Further, to recognize a consonance as a mimesis of the heavens, we need to have thought about the mechanisms of perception and to have appreciated that the pleasure the mortal soul experiences in this perception is a result of the good and unlikely organization of the body by the Demiurge. In short, should we wish achieve delight in full, we need to engage in the sort of activity gestured at in the project of the *Timaeus*: exploring the heights and depths of the *kosmos* so as to recover what we had learned when we were first assigned a star and shown the nature of the universe (41e).

Music and hearing play an important role in initiating this wider pursuit of knowledge: since the mortal soul is predisposed to like the glittering heavens and the smooth strains of sounding harmony even at the level of bare qualities, we possess an innate motivation to pursue these objects.³⁴ Though the *Timaeus* may not be about music, music opens the doors of perception and inquiry of the harmonious *kosmos*. Knowledge of the *kosmos* will in turn imbue music, even at the order of sounding material, with the whole of the intelligible *kosmos*, much to the delight of the intelligent.

32 Unlike earlier Platonic dialogues perhaps, the *Timaeus* does not seem to propose an intellectual ascent which surpasses and leaves behind the perceptible realm. Roxana Carone has even suggested that the Demiurge himself is immanently corporealized as the embodied World Soul. Carone 2005, 49-51.

33 We might compare *Phil* 17d-e, 26a-b in thinking about the discovery and creation of musical harmony.

34 Notably, *Timaeus* does not detail the education program that would make use of these predilections; to explore this, we would need to turn to the *Republic* or the *Laws*. That, however, is a project for another time.

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Vocables and Microtones in Ancient Greek Music

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Abstract

This article discusses ways in which non-lexical utterances are linked in ancient Greek music to the representation of musical phrases. It first considers the possible use of ‘vocables’ in ancient Greek, i.e. vocal utterances lacking lexical content which may be substituted for the rhythms of a song for the purpose of the instruction or transmission of music. A system of vocables (distinct from solmization) outlined by Aristides Quintilianus is investigated to see if it can be shown to be related to principles of vowel pitch modification, whereby phonetically ‘high’ vowels tend to be enunciated at a higher pitch than ‘low’ ones. Since such variances could be heard in the context of microtonal music as creating wholly different musical notes, the Orestes papyrus is examined in detail to see if the enharmonic musical setting is affected in any way by principles of vowel pitch modification, with the conclusion that it is.

Keywords

vocables – vowel-pitch – microtones – enharmonic – Orestes papyrus

Introduction

I propose in this article briefly to draw attention to two separate but connected questions of musicological interest for ancient Greek music. Both relate to the way elements of vocal utterance are linked, whether naturally or by convention, to the representation and expression of musical phrases. The first question relates to the possible use in Greek music of syllabic sounds that may be identified as ‘vocables’, a term I derive from the work of Cambridge-based researcher and piper Barnaby Brown, whose current project consists of the transcription and analysis of a booklet written entirely in vocables as a means

of transmitting the sounds of a Celtic triple-pipe performance. Vowels are generally defined in a musical context (rather than in everyday speech, where they have a different function such as the *uh-oh* that signals concern) as 'vocal utterances lacking semantic or lexical content which may accompany or be substituted for the words of a song' (e.g. *la la la*, *bebop-a-lula*, *bow-chicka-wow-wow*).¹ More formally, however, such utterances may be used to represent, for the purpose of the instruction, learning, remembering, or transmission of music, elements of the rhythmical and melodic articulation of a musical phrase, motif, or structure.²

Vowels of the first kind may be identified as present in some ancient Greek songs, e.g. *brekekekex koax koax* imitates the croaking of frogs and *trophlathrat* is used to indicate the strumming of the kithara in Aristophanes' *Frogs*, while *otototoi popoi da* is the arresting wail that precedes the prophetic laments of Cassandra in Aeschylus' *Agamemnon*.³ But there are also clear indications that the musicological use of vowels was known and used by the Greeks. Vowelisation (this is the least awkward form of the noun that connotes 'the use of vowels') can and should be distinguished from the more familiar notion of solmization. In solmization, the locations of the notes of a scale (such as the tonic, dominant etc.) are assigned to a particular non-lexical syllable, as with *do re mi fa so la ti* in the Western scale or *sa re ga ma pa dha ni* in the classical Indian system.⁴ Unlike these syllables, which are used to represent the relative pitch of a note within a melodic or harmonic structure, musical vowels are rarely used systematically to indicate pitch locations within a system, though in practice they may serve to distinguish differently pitched utterances.

The key place of vowels in teaching and transmission is familiar to practitioners of orally transmitted musical traditions such as that of Celtic triple-pipe, Native American song, Indian tabla, and Sardinian launeddas. The fact that they have inevitably left little trace in written tradition has led to an

1 The unpublished thesis (available online) by Christine Knox Chambers (1980) is currently the most comprehensive introduction to and discussion of non-lexical musical vowels. She refers (1) to 'vowels without lexical or semantic content which convey musical meaning to the listener'.

2 'The systematic representation [of musical sounds . . .] in vowels with consistent assigned or associative meaning': Chambers 1980: 29.

3 It is not clear how idiosyncratic these particular choices were, as they are not found in other ancient texts. Equally, when Aristophanes' represents birdsong in *Birds* by such vowels as *torotorotorotorotix* (260) and *tiotiotiotiotinx* (738), these appear to be his own inventions.

4 On the origins of *do re mi* see Lyons 2007: 26-40.

undue neglect of their crucial role as musical mnemonics in such contexts.⁵ The occasional use of vocables in differentiating notes sung at variant pitches, something that arguably can be shown in the ancient Greek context, leads to the second question. Given the widely observed tendency for different vowel-sounds to modify the pitch of an utterance in different ways ('vowel-pitch modification'), is this something we can observe either in the choice of vowels for vocables or even in the melodic settings of vowels in the composition of ancient Greek song? Vowel-pitch modification, which is thought to arise from the 'pull' of the tongue in enunciating different vowels and the effect of this on the larynx, regularly results in phonetically 'high' (or 'close') vocalic sounds such as [ī] and [ē] being enunciated at a higher pitch (up to 25hz higher according to some measurements) than that of 'low' (or 'open') vowels such as [ā] and [ō].⁶ Since a difference of 25hz at a mid-range of vocal pitch (e.g. between $a=425$ and $a=440$) constitutes a difference of less than a semitone, in modern Western music where the smallest formal interval is generally a semitone the variance would be heard as a matter of tuning rather than the attempt to pitch a different note.⁷

However, in the case of music composed with microtones as an intrinsic part of the harmonic structure, as was the case with the enharmonic scales of archaic and classical times, the modification of pitch by vowel choice will have had a more significant effect. This effect seems *prima facie* likely to have been taken into account, or at least unconsciously allowed for, in the formal setting of microtonal pitches to the syllables of words. The question will therefore be considered in conjunction with a close examination of the vowels to which the microtone pitches are attached in the earliest substantial extant musical document, the Rainer papyrus (*DAGM* 3) with verses from a chorus of Euripides' *Orestes*.

5 Nettl (1989: 69-72) details the vocable system used in Blackfoot Indian song. A fascinating demonstration of the use of vocables in practice by the Sicilian launeddas maestro Luigi Lai can be viewed on a Youtube video produced and filmed by Barnaby Brown: <https://www.youtube.com/watch?v=1FGHzem-cvE>.

6 Ohala 1978: 29. A further phonetic feature, the qualitative difference between 'front' (i, e, a) and 'back' vowels (u, o, ā), means the former tend to fall at a marginally higher pitch than the latter. In Blackfoot Indian song, which consists mainly of vocables, the vowels *i* and *e* tend to be sung slightly higher in pitch, while *a*, *o*, and *u* are lower: Nettl 1989: 71.

7 Choir conductors recognise the importance of vowel modification when they instruct choirs to pronounce [e] as a high-sounding [é] to ensure that the singing does not sound flat.

Aristides Quintilianus' Scheme of Vocables

A clay epinetron (knee-guard for sewing) dating from the early fifth century BC portrays an Amazon blowing a trumpet, with the letters TO TH and TO TE inscribed on either side of the depicted figure.⁸ In 1984 A. Bélis proposed that the syllables should be taken as a form of solmization to indicate the notes played on the trumpet; others have interpreted them in less specific terms.⁹ In the light of our consideration of vocables, we might now posit an intermediate interpretation: the syllables are vocables representing a fanfare, i.e. more specific than *taratantara* (the comparandum suggested in *DAGM*) in that note-pitches are differentiated, but insufficiently specific to support a precise melodic interpretation.

The principal evidence for identifying this use of vocables in ancient Greek music appears in a scheme described by Aristides Quintilianus, which is reinforced with some differences by passages in the Anonymus Bellermanni. Aristides writes (Barker's translation):¹⁰

Since the character of melody, both in song and in instrumental pieces (*kōla*), is grasped through its similarity to the sounds produced by our vocal organs, I have made a selection of the letters that are suitable (*harmottonta*) for use in vocalising melodies. There are seven vowels [α ε η ι ο υ ω], and we can see the distinctions mentioned previously both in the long ones and the short.

Not untypically for his age, Aristides goes on to assign male and female characteristics to different vowel sounds which by and large correspond to phonetically 'low' and 'high' vowels:

In general, the ones that extend the mouth vertically have a more dignified sound, appropriate to the male, and those that pull it out horizontally give out inferior sounds of a more female sort. To be specific, among the long vowels the sound of the omega [ō] is male, since it is rounded and concentrated, and that of the eta [ē] is female, since the breath is somehow dispersed and filtered in producing it. Among the short vowels, the omicron [ō] displays a male sound, since it compresses the vocal organ and snatches away the sound before it is fully uttered, while the epsilon [ē], which has a way of making the mouth gape as it is pronounced, is

8 *DAGM* No. 1.

9 Bélis 1984; *DAGM* 8.

10 Arist. Quint. 77.30-79.5, 79.26-80.1 (Barker 1989: 479-81); Anon. Bell. 9-10, 77, 86, 91.

female. Of those which may have either long or short duration, the alpha [a] is best for melody, since the breadth of its sound makes it easy to prolong. The others are less so, because of their thinner sound.

Practical aural experience here intervenes, encouraging Aristides to make some qualifications to a simple binary schema and to introduce fanciful notions of dialectal ethos:

Here again an intermediate character may also be detected. Thus alpha displays both affinity and contrast with eta: so far as it is adopted for a use opposite to that of the latter it is male, while so far as it produces a similar signification it is female. This is shown by the contrasting dialects, Doric and Ionic, whose differences correspond to the opposing characters of the two races. Doric avoids the female quality of the eta, and in practice generally converts it into a male alpha, while Ionic shrinks from the hardness of the alpha and settles on the eta. The epsilon is female for the most part, as I said before, but because when it is prolonged it produces a sound similar to the diphthong written alpha-iota [ai], it acquires through the alpha a very small trace of the male.¹¹ Further if you scrutinise the letters used in the articles and terminations in all their cases, you will see clearly that masculine nouns are preceded and ended by masculine letters, feminine ones by feminine letters and sounds, and those that are neither by intermediate ones.

Finally, Aristides sets out a scheme that assigns a particular vowel sequence to vocables representing the pitches of a rising tetrachord:

Four of the vowels, those that are readily prolonged by the singing voice, turned out to be useful for representing the notes. Since a consonant had to be added to them, to avoid the hiatus which would be produced by a sound consisting of vowels alone, we adopt tau, the most attractive of the consonants. [...] In the primary *systema*, the tetrachord, the first note is sung to the letter epsilon, while the remainder follow the order of the vowels. Thus the second note is sung to alpha, the third to eta, and the last to omega [so te ta tē tō].

11 This statement (which passes without comment by Barker) is interesting evidence for the pronunciation of the diphthong αι at the time of Aristides: not [e] as it becomes in later Greek, but evidently closer to [e] than to the true diphthong [ai], with a sufficient tinge of [a] for it to be recognised as a related phoneme.

The curiously casual turns of phrase in the passage ('I have made a selection', 'turned out to be useful', 'we adopt') suggest that Aristides is formulating, at least to some degree, his own idiosyncratic view of the matter rather than presenting a generally recognised scheme of vocabelisation.¹² His conclusion that the series of rising notes in a tetrachord may be 'appropriately' represented by the vocables *te ta tē tō* is amended by the author of Anonymus Bellermanni, who may have had Aristides as a source. The author sets out a way of using these same vocables to indicate that the rising notes of a tetrachord may be represented by *ta tē tō ta*, with *te* applied only to the central and outermost notes of the system (the *mesē* and *proslambanomenos*).¹³ For four conjunct tetrachords, the scheme may thus be represented as follows (*mesē* and *proslambanomenos* underlined):

[____][____][____][____]
te ta tē tō ta tē tō te tē tō ta tē tō ta

Whatever the precise interpretation of the scheme, the result is clearly not a strict form of solmization, as the same vocables are required to be applied to different notes within the scale. Its main function in practice, then, would be to distinguish successive notes in the tetrachord, when enunciating them as a series (and perhaps in a melodic phrase as well, though there is no clear evidence for such use), as lower or higher in pitch between the notes that are fixed (assigned to *ta*) at either end of each tetrachord.

What advantages might such a scheme have over, say, simply repeating *ta* as one progresses through the notes of the tetrachord (just as singers today repeat 'la' when singing scales)? One evident benefit would be to allow singers of an enharmonic sequence in particular to pitch a microtone with greater ease *simply by virtue of vowel-pitch modification*. The fact that the vocalic sequence is organised to allow an alternation of low and high (in Aristides' terms, male and female) vowels is clearly not coincidental. In the first two rising notes of the tetrachord, where the intervals of the enharmonic *puknon* would arguably be hardest to pitch, the selected syllables allow for a clearly heightening vowel shift from [a] to [ē]. In practice, a singer pitching a note, say, to accompany the utterance of the mid-open vowel [a] might readily achieve a quarter-tone

12 Such qualifying phrases are not found elsewhere in Aristides' presentation. The discussion of vocables may fall into the latter category of matters of which he writes (65.11-12) 'I shall set out what some ancient writers said, and also some things which have not previously been discussed'.

13 Cf. Barker 1989: 481, West 1982: 265.

heightening simply by shifting the vocal utterance to the high vowel [ē]. The subsequent low vowel in the series, [ō], would have the converse effect of lowering the pitch on the same note; but since, in Aristides' scheme, it would fall in the sequence on a note at least a semitone higher than the preceding vocable, it offers the corresponding advantage of allowing the higher note to tend towards the flatter end, thus ensuring the intonational compactness of the group of notes separated only by microtonal intervals, the *puknon*.

The Doric Songs of Attic Tragedy

These considerations may have a bearing on a less fanciful interpretation of the use of the Doric alpha in the singing of certain kinds of Greek poetry than the kind of explanation offered by Aristides. The widespread use of this centrally differentiating feature of the Doric dialect in the choruses of Attic tragedy in particular has not been satisfactorily explained. Given that the chorus constitutes *par excellence* the musical element of drama, it is surprising that a purely or principally musical interpretation has never been proffered.¹⁴ In particular, it might seem evident to a singer-composer that the open mid-vowel [a] and its low counterpart [ā] are generally the most suitable vowels to which to pitch an intonationally stable sung note. As we have seen, high vowels such as the [ē] that represents the sound of classical eta are prime candidates for easing the shift to a higher pitch simply through the effect of vowel-pitch modification. The fact, then, that the vowel sound [ā] was heard as a principal feature of the difference between Doric and Ionic-Attic dialect may be no more than a fortuitous adjunct to its advantages for musical expression.

This consideration may be brought to bear on the explanation for a unique metrical phenomenon in Greek tragedy, the fourteen heavily Doricised dactylic verses formed in elegiac couplets in Euripides' *Andromache* (103-116):

Ἰλίῳ αἰπείνῃ Πάρις οὐ γάμον ἀλλὰ τιν' ἄταν
 ἄγάγετ' εὐναιῶν εἰς θαλάμους Ἑλένης.
 ᾄς ἔνεκ', ὦ Τροία, δορι καὶ πυρὶ δηιάλῳτον
 εἶλέ σ' ὁ χιλιόναυς Ἑλλάδος ὀξὺς Ἄρης
 καὶ τὸν ἐμὸν μελέας πόσιν Ἑκτορα, τὸν περὶ τείχῃ
 εἵλκυσε διφρεῦων παῖς ἀλίῃς Θέτιδος:

14 The standard and hitherto unchallenged interpretation of the use of 'alpha impurum' in Attic tragedy is that of Björck 1950, who concludes that in the lyrics of tragedy the language is given a superficial Doric colouring when Attic-Ionic *ē* represents an original *ā* of early Greek; see e.g. Mastronarde 2002: 83, Rutherford 2012: 220.

αὐτὰρ δ' ἐκ θαλάμων ἀγόμεν ἐπὶ θῖνα θαλάσσης,
 δουλοσύνην στυγερὰν ἀμφιβαλοῦσα κάρα.
 πολλὰ δὲ δάκρυά μοι κατέβη χροός, ἄνικ' ἔλειπον
 ἄστρ τε καὶ θαλάμους καὶ πόσιν ἐν κονίαις.
 ὦμοι ἐγὼ μελέα, τί μ' ἔχρην ἔτι φέγγος ὀράσθαι
 Ἑρμιόνας δούλην; ᾗς ὑπο τειρομένῃ
 πρὸς τόδ' ἄγαλμα θεᾶς ἱκέτις περὶ χεῖρε βαλοῦσα
 τάκομαι ὡς πετρίνῃ πιδακόεσσα λιβάς.

(Not as a bride did Paris bring Helen to lofty Troy into his chamber to lie with, but as a force of destruction. For her sake, O Troy, the harsh war-machine of Hellas with its thousand ships captured with fire and sword and destroyed you and—wretched am I—my own husband Hector whom the son of sea-goddess Thetis dragged as he drove his chariot around the walls of Troy. I myself was led from my room down to the sea-shore, donning hateful slavery onto my head. Copious tears rolled down my cheeks when I left my city, my home, my husband in the dust. Oh wretched am I—why must I still look on the light of life, as Hermione's slave? Browbeaten by her I have come to this statue of the goddess as a suppliant, and casting my arms about it I melt in tears like a spring gushing from a rock.)

No fewer than eighteen alphas (underlined in the Greek text) would have been represented by etas in normal Attic speech; there would have been a yet higher number of etas in an Ionic version (e.g. in place of the last alpha of μελέας, θαλάσσης and στυγερὰν). Yet the dactylic scheme, and the elegiac couplet in particular with its epodic structure, are notably Ionic verse-forms, associated with the earliest poets of the Ionian world, Homer and Archilochus, and such associations would have been clear to Euripides and his audience.

The attempt to find a historical basis for such a conflation of Ionic form with Doric style led D.L. Page to postulate a possible early flourishing of 'Doric elegy', but the attempt was doomed to failure by the complete lack of supporting evidence for such a genre.¹⁵ Commentators have subsequently sought to justify the existence of these verses in terms of their deliberate reversal of epic associations, in conjunction with Euripides' well-known penchant for innovation

15 Page 1936. The notion of 'an archaic form of threnodic elegy sung in the Doric dialect' is revived by Faraone 2008: 129, but the main evidence he adduces is the observation that Andromache's lament is structured in an 'archaic stanzaic form'.

and love of *to kainon*.¹⁶ 'The lament's Doric alpha is a regular feature of tragic lyric but its primary effect here is to distinguish these dactyls from the epic tradition and to add to the delightful novelty'.¹⁷ But there are musicological considerations to be brought to bear on the notion of Ionic versus non-Ionic musical associations. First, whatever the basis for the original melodisation of the epic, by the fifth century it seems clear that the performance of Homer was either rhapsodic (i.e. essentially non-melodic) or kitharodic (i.e. melodised in a non-traditional manner).¹⁸ Equally, the composition of Archilochian elegies and iamboi, with their inventive epodic verse-forms, was firmly associated with non-melodised performance; whether or not Archilochus actually 'invented *parakatalogē*' (recitative), his poetry was remembered and transmitted in a non-melodic form.¹⁹ Both Homer and Archilochus, therefore, composing in their unashamedly mixed or Ionic dialects and using simpler melodic or largely non-melodic strains, would have had less use for the pitch clarity that would be imparted by the singing of notes to vowels that would not produce or demand undue pitch modification.

By contrast the tragedians, like the early composers of competitive dithyramb, were heirs to a more precise tradition of melos, one which required a tragic no less than a dithyrambic chorus to be precise about co-ordinating voices, not least to ensure that no undue sibilance clashed with the sinuous sound of the aulos.²⁰ The musical imperative to prefer a predominance of alphas to etas was likely to have been conflated with the idea of a Doric ethos of the kind suggested by Aristides. A parallel may be drawn with the widespread use of American-sounding accents and expressions in the singing of contemporary pop music by UK bands. This is not only or even primarily out of homage to the largely American origins and development of the genre, though such associations will undoubtedly be present. But it may be more significant that, from the era of the Beatles and before, pop singers were bound to recognise the advantages for singing of the consonantal palette of American speech (soft t, rolled l, clearly enunciated r) combined with more open, extendible, and less prosaic-sounding vowel sounds, the flatter a in particular allowing for a greater emotional impact in the prolonging of that vowel-sound in the words of a song.

16 Cf. D'Angour 2011: 203, 210.

17 Allan 2000: 200.

18 Power 2010: 435-441.

19 Ps.-Plut. *De mus.* 1141a; West 1982: 40; Moore 2008.

20 D'Angour 1997: 334-337.

Microtone Shifts in the Orestes Papyrus

The above discussions are bound to arouse curiosity about whether the reality of vowel modification might be observable to any degree in one of the central items of evidence for the arguably enharmonic music of classical tragedy, the *Orestes papyrus*.²¹ First, however, one must briefly consider the question of whether vowel modification might be expected to alter, consciously or unconsciously, the melodisation of Greek words in general. What speaks decisively against this possibility is the fact that the placement of the pitch accent over vowels is wholly independent of the quality of vowels in regard to their being high or low (though it is possible that a more thoroughgoing statistical analysis of the lexicon would show some element of correlation). Thus the fact that a high vowel in a sequence of phonemes is sometimes pitched higher than a low one (as in βουλή) is no more significant than the fact that a high vowel in such a sequence may occasionally fall at a lower pitch than an accented low vowel (e.g. συγγνώμη).

This is not to say, however, that (all things being equal) small pitch differences depending on the particular elements of a vowel sequence, of a kind would not have been noticeable to the more sensitive pitch-attuned ears of Greek speakers. Thus in the word ἀμήχανος the pitch rise on eta is dictated by the recessive proparoxytone; it is hard to doubt that a higher pitch would naturally have accompanied the same vowel in the enunciation of ἀμηχανία, where the primary pitch-rise shifts to the penultimate syllable but a secondary rise would seem to be indicated—not just by aural memory of the word pitch of the shorter word but by the principle of vowel-pitch modification.

Where specific significance may be expected to be found arising from the recognition of the different qualities of high and low vowels is in the setting of microtonal pitches to melodised words and phrases in a formal musical context. Microtonal intervals occur fairly commonly in the relatively small span of text in the *Orestes papyrus*, in so far as it is to be interpreted as composed using the enharmonic genus. Below I refer to the 'lines' of the staves with enharmonic transcription in *DAGM* 3 (p. 13). For the purposes of description, I indicate the microtonally higher note following *a* as *a*#, and the note a quarter tone higher as *b*b; and that following *e* as *e*#. My assumption is that Euripides set to melody the words of the strophe (the papyrus has only a portion of the antistrophe). An analysis of whether high vowels in the text of the strophe might

21 The discussion in Devine and Stephens (1994: 174-6) is too technical to be helpful to the non-specialist; but as they use data only from the much later non-enharmonic Delphic Paean, they unsurprisingly conclude that there is no 'sensitivity to intrinsic fundamental frequency'.

regularly have attracted a microtonally higher melodic realisation regardless of word pitch results in the following observations.

Line 1 (vv. 322~339): ἀΐματος

Set to *b♭* - *a♯* - *a*: the profile is exactly as one might expect from the point of view of vowel effect, with the higher vowels (or diphthong) set to higher pitches than the lower. The melodic profile also accords with the word's pitch profile.

Line 2 (vv. 323~338): τινύμενοι

Only the notes over the first three syllables are legible, indicating *a♯* - *g* - *b♭*. The microtonal note *a♯* coincides with *τι*-, phonetically a slightly higher vowel than the succeeding *νύ*-. The melodic profile does not accord with the word pitch.

Line 3 (vv. 324~340): καθικετεύομαι (bis)

In the first incidence of the word, syllables 2-4 (-*θικετεύ*-) rise *e-e♯-f*, while in the iteration syllables 4-6 (*τεύομαι*) fall *b♭* - *a♯* - *a*, imitating line 1 above. In the first case, the height of vowels/diphthongs *ι-ε-ευ* is arguably neutral, though *ευ* may be considered slightly higher than *ε* and is so melodised. In the second, the *ο* of the second syllable is lower than the *ευ* of the first, and in addition the melodic profile conforms to the word accent.

Line 5 (vv. 326-342): γόνον ἑάσατ' ἐκλαθέσθαι

Two microtonal movements appear in this phrase, on -*νον ἑ*- (*a*- *a♯*) and -*σατ' ἑκ*- (*a*-*a♯*). Neither dissyllable has a pitch accent, but both conform to the expected vowel-pitch modification, rising on the more open vowel. In addition, *λαθέσθαι* is set to *g*-*a*, rising in accord with both the vocalic principle and the word accent.

Line 6 (vv. 327-343): μανιάδος

The phonetically higher (or more 'close') *ι* yields to the microtonally lower *a♯*, despite the latter syllable being the location of the word accent.

Line 7 (v. 328): ὄρεχθεις

The first two syllables (with vowels *ο* and *ε*) are set to *a*-*a♯*, conforming to the expected vowel-pitch modification; neither has a word accent.

The results are striking. In every case the phonetically higher vowel attracts a microtonally higher melodic setting, regardless of and occasionally violating word pitch. This preliminary finding might encourage further investigation

into the issue, with the possibility (assuming the sample size is not so small as to be worthless) of statistically evaluating the likelihood of conformity of melodisation to the principles of vowel-pitch modification.

Conclusions

The preliminary investigation presented above seems to confirm a sensitivity to vowel-pitch modification in ancient Greece, one that might indeed have been expected from speakers of and song-composers in a tonally inflected language. It also suggests that the degree of pitch-shift that different vowels create may have been recognised by composers such as Euripides in their setting of words to microtonal music, where such shifts might have caused significant changes in the identification or utterance of specific pitches by singers and hearers. As argued earlier, the composition of the vocables as presented by Aristides Quintilianus and the Anonymous Bellermanni also appear to show an intelligent musical observance of the vocalic pitch-qualities to which notes in a tetrachordal sequence might be assigned (regardless of Aristides' own wayward exposition of vocalic ethos). Further ancient evidence for the practical use of vocables is hard to find, but ethnographic comparisons should leave little doubt that vocables of the kind identified may have played an important part in the learning and transmission of Greek musical sounds, phrases and techniques.²²

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Il corpo dell'auleta

Produzione, percezione e visualizzazione del suono

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Abstract

The versatility of the *aulos* is passed on to the musician, who in turn is transformed into a physical representation of the instrument's sound. With the precious aid of book IV of Pollux's *Onomasticon* it is possible to reconstruct the special set of vocabulary linked to the sound of the *aulos*. If it could already in itself be considered as ἐπαγωγόν, the additional effect of the movements, gestures, and facial expressions of the aulete resulted in a strong visual, as well as emotional, impact. Nor can we forget, on the other hand, the less than favorable judgments, abundant in philosophical texts, that arose in regard to auletic performances: just as certain physiognomic traits of the *aulos* are to blame, so too are certain bodily movements of the aulete: almost as if the negative characteristics are passed reciprocally from instrument to musician in a sort of circular breathing.

La versatilità dell'*aulos* si trasmette all'esecutore, che durante la *performance* diviene così immagine fisica e concreta del suono percepito. Con il prezioso ausilio del libro IV dell'*Onomasticon* di Giulio Polluce è possibile ricostruire il campo semantico legato alla produzione del suono auletico. Se esso poteva già di per sé essere avvertito come ἐπαγωγόν, inoltre, i movimenti, i gesti e le espressioni facciali dell'auleta risultavano di forte impatto visivo, oltre che emotivo. Non ci si può dimenticare, d'altro canto, dei giudizi poco benigni, affioranti soprattutto dai testi filosofici, in merito alla pratica auletica: come alcuni tratti della fisionomia dell'*aulos*, così anche alcuni atteggiamenti del corpo dell'auleta sono biasimevoli, quasi che le caratteristiche negative passino vicendevolmente da strumento a esecutore in una sorta di respirazione circolare.

Keywords

Ancient Greek music – *aulos* – aulete – auletic-performance – bodily movements – sound-production – sound-perception – sound-visualization

Introduzione

Tra gli strumenti musicali a fiato nella Grecia Antica l'*aulos* era sicuramente il più importante e popolare: grazie alla sua varietà e ricchezza melodica, era usato in molti contesti ed era in grado di imitare le molteplici modulazioni della voce umana. Questo tratto dell'*aulos*, la versatilità, si trasmetteva inevitabilmente alla figura dell'auleta, che durante l'esecuzione diveniva immagine fisica e concreta del suono percepito; anzi, è possibile a buon ragione affermare che la *performance* strumentale desse una nuova forma al corpo umano secondo le proprietà fisiche e acustiche dello strumento.¹ Nella sua *Antropologia della musica*, Merriam (2000, 115) distingue “quattro tipi di comportamento legati alla produzione e all'organizzazione del suono: il comportamento fisico, il comportamento verbale, il comportamento collettivo, e l'apprendimento”. Con il concetto di “comportamento fisico”, l'etnomusicologo si riferisce all'insieme dei movimenti del corpo finalizzati alla realizzazione del suono attraverso l'uso di uno strumento.² La pratica dell'*aulos* era un'attività eminentemente corporea che richiedeva l'interazione e la coordinazione di fiato, labbra, denti, lingua, dita e talvolta piedi per battere il ritmo.

Più in generale, accanto alla presenza di sezioni artificiali (carapace, canna, budello, legno), ogni tipo di strumento musicale (ὄργανον)³ poteva riflettere nella sua costruzione la forma o la funzionalità di alcune parti o di alcuni organi del corpo umano: ad esempio, un *aulos* possedeva una lingua (γλῶττα),

1 Riprendo questa bella immagine dal testo della CFP per la MOISA Annual Conference “Music and the Body in Greek and Roman Antiquity” (29-31 luglio 2015, Newcastle University, UK), cui ho partecipato con il presente contributo. Desidero ringraziare per questa occasione di confronto e per i loro preziosi suggerimenti i Proff. Andrew Barker, David Creese, Angelo Meriani, Massimo Raffa, Donatella Restani ed Eleonora Rocconi. Ringrazio, inoltre, il Prof. Simone Beta per l'attenzione mostrata nei confronti di questa ricerca.

2 Merriam 1983 (trad. It.), 122.

3 In epoca alessandrina il termine ὄργανον, accompagnato dall'aggettivo ὑδραυλικόν, iniziò a indicare un particolare strumento musicale, un vero marchingegno, inventato da Ctesibio verso il 250 a.C. (cfr. Chailley 1976). Per le parti degli strumenti musicali a corda e a fiato si vedano rispettivamente: Poll. 4.62 e 4.70. Sui materiali impiegati per la costruzione degli *auloi*: Poll. 4.71.

ovvero un'ancia.⁴ Spesso si istituiva un'analogia fra l'apparato fonatorio umano (trachea più laringe) e il corpo dell'*aulos*, poiché entrambi erano “costituiti da un tubo alla sommità del quale si trovava un dispositivo che rendeva possibile la produzione del suono”.⁵ In particolare, in un passo del libro VII del *De usu partium* relativo alla laringe, Galeno descrive le tre cartilagini che compongono l'organo della fonazione e afferma che dalla loro unione risulta una sorta di *aulos*,⁶ alludendo alla successione—in perfetta simmetria con le cartilagini—di ὑφὸλμιον, ὄλμος e γλώττα nella parte superiore dello strumento.⁷

Ci troviamo dunque di fronte all'immagine di uno strumento musicale a tratti antropomorfo, e a una figura umana, quella dell'auleta, a sua volta ‘strumentalizzata’ dalle leggi dell'esecuzione. L'*aulos* amplia le sonorità producibili naturalmente dall'uomo e diviene una sorta di estensione del corpo dell'auleta—se non della sua appendice nasale, come nel caso del demone celeste presente nel *Trittico del carro di fieno* di Hieronymus Bosch (Fig. 1), almeno del suo fiato!⁸ In quest'ottica, risulta di estremo interesse esplorare il ricco terreno di incontro e di interazione tra la cultura musicale e quella visiva su cui danzava la *performance* musicale auletica.⁹



FIGURE 1

Hieronymus Bosch

Trittico del carro di fieno, dettaglio del pannello centrale, 1512–1515

Olio su tavola, 135 × 100 cm

Madrid, Museo del Prado.

4 Raffa (2008, 176-177 e n. 5) afferma che questa metafora ‘spenta’ è collocata a un livello “funzionale” o anche ‘fisiologico’, in quanto pertiene al funzionamento della macchina fonatoria, sia essa naturale o artificiale”.

5 Raffa 2008, 177 (cfr. anche la nota relativa). Cfr. Ps.-Arist. *Aud.* 800b20-27, 803a18-20 e 804a10-12; Ptol. *Harm.* 1.3 (su cui vd. Raffa 2008, 180-181).

6 Gal. *UP* 7.11.16-17 (ὥσθ' ὅσον αὐλὸν τινα γίγνεσθαι τὸ συγκεείμενον ἐκ τῶν τριῶν).

7 Raffa 2008, 178-179. Ancora sulla similitudine laringe-*aulos*, cfr. Gal. *UP* 7.13.

8 Cfr. Csapo 2004, 217: “The pipes [...] protrude awkwardly from the body, and set it in motion, like a tail wagging the dog [...]”.

9 Cfr. Merriam 2000, 125: “[...] sembra che gli studi sulla produzione fisica del suono, sui movimenti fisici del musicista e sulla risposta fisica dell'ascoltatore siano questioni di massima importanza per una comprensione al livello inter-culturale del comportamento musicale.”

Il linguaggio auletico: Poll. *Onomasticon* 4.67-84

All'interno dell'*Onomasticon* di Giulio Polluce vi è una sezione dedicata agli strumenti musicali a fiato nell'antica Grecia e, in particolare, al più importante di essi: l'*aulos* (Poll. 4.67-84).¹⁰ L'opera, dedicata all'imperatore Commodo, è strutturata come una raccolta, in dieci libri, di termini, sinonimi e modi di dire attici ordinati tematicamente.¹¹ Purtroppo, il testo non si presenta a noi nella sua redazione originaria, ma mostra i chiari segni dell'interpolazione e dell'epitomazione.¹² Tenendo conto di ciò, bisogna quindi adottare una certa cautela nell'accostarsi all'*Onomasticon* e nell'attribuire a Polluce determinati orientamenti teorici, da un lato, e presunte mancanze, dall'altro. Inoltre, come il grammatico specifica nella lettera dedicataria del primo libro, una sorta di *ouverture* programmatica, 'fine dell'opera infatti non è tanto raccogliere tutti i termini (εἰς πλῆθος), ma fornire uno strumento di scelta a chi voglia parlare bene (εἰς κάλλους ἐκλογὴν).'¹³

Sebbene Polluce non fosse un musicologo esperto, tuttavia le informazioni contenute nel quarto libro, concernente l'onomastica delle τέχνηαι e delle ἐπιστήμαι, testimoniano l'attenta cura nella catalogazione degli *onomata* e il vasto interesse antiquario del grammatico in campo musicale. Rimane difficile identificare le fonti cui Polluce attinse; si è pensato alla Θεατρικὴ ἱστορία di Giuba re di Mauretania (50 a.C.-23 d.C.), che riprendeva fonti più antiche di età ellenistica, e agli scritti di Trifone (I a.C.), che raccolse i nomi degli strumenti musicali.¹⁴

L'*Onomasticon* restituisce anche testimonianza di *loci classici*, talvolta altrimenti perduti. Le citazioni più numerose, quelle di autori comici attici, sono molto probabilmente tratte da antologie tematiche precedenti, che avevano a

10 Per una panoramica generale sulla storia di questo strumento nella musica greca, vd. Barker 2002.

11 Sull'autore e la sua opera, vd. Tosi 2005 e Tosi 2007¹. Fondamentali per la comprensione della struttura dell'opera e del metodo compositivo di Polluce sono gli studi di Desideri 1991, Radici-Colace 1997, 2000, 2013, Tosi 2007² e Zecchini 2007.

12 Bethe 1917, 776.

13 Trad. P. Radici Colace 2013, 27.

14 Ath. 4.174e attribuisce un Περὶ αὐλῶν καὶ ὀργάνων a Trifone. Restani 1988, 29 sottolinea come nel libro XIV dei *Deipnosophisti* di Ateneo fossero confluite "numerose testimonianze di trattati di organologia e didattica, purtroppo perduti, degli strumenti a fiato"; cfr. Restani 2009. Cfr. Aristox. fr. 101 Wehrli ap. Ath. 634e-f per la classificazione degli *auloi*, non di molto dissimile a quella in Poll. 4.80, e per la menzione di un Περὶ αὐλῶν τρήσεως attribuito ad Aristosseno in aggiunta a un Περὶ αὐλῶν e un Περὶ αὐλετῶν (Aristox. fr. 100 Wehrli ap. Ath. 634d).

loro volta selezionato e organizzato il materiale in repertori.¹⁵ Ad ogni modo, consultando l'indice degli autori citati nell'opera, si desume che "la rosa di 'testi' utilizzati ricade all'interno di un contesto sociale e cronologico omogeneo, e illumina la greicità attica del v e del iv secolo"¹⁶: appare evidente che la realtà musicale testimoniata da Polluce era già antiquaria nel momento della redazione originaria dell'opera. Per esempio, in Poll. 4.67 ricorre la terminologia tipicamente associata ai caratteri della cosiddetta 'Nuova Musica' di fine v e inizio iv sec. a.C.; ancora, Poll. 4. 70 indica il participio ἐμπεφορβειωμένον, attestato altrove solamente in Ar. Av. 861.¹⁷

Grazie alle informazioni forniteci da Poll. 4.67-73 è possibile ricostruire il campo semantico legato alla produzione e alla percezione del suono auletico: espressioni relative alle tecniche di emissione del fiato e all'abilità manuale, aggettivi riferibili all'altezza, all'intensità e alla continuità del suono. Immaginando l'*aulos* come un ὄργανον dotato di 'lingua' e allo stesso tempo come un'estensione del fiato dell'auleta, non suona stonato parlare di una 'voce' dello strumento con sue proprie caratteristiche e particolarità.¹⁸ Il mio intento è dunque quello di consultare, all'interno dell'*Onomasticon*, la 'voce enciclopedica' dell'*aulos*, intessuta di richiami e di citazioni provenienti da altri autori antichi, per scoprire quanto più possibile in merito alla 'voce sonora' dello strumento, nonché alla figura che all'*aulos* dava fiato, 'prestava' la voce.¹⁹

Di seguito sono riportate alcune sezioni del testo di Poll. 4.67-73 tratto dall'edizione di E. Bethe.²⁰

67) τὰ δ' ἐμπνεόμενα ὄργανα τὸ μὲν σύμπαν αὐλοὶ καὶ σύριγγες [...] καὶ ἀπὸ μὲν αὐλῶν αὐλεῖν, ὑπαυλεῖν, προσαυλεῖν, καταυλεῖν, παραυλεῖν, αὐλημα, ἔναυλον, ἔξαυλον, ἔξηλημένος. καὶ πολύφθογγος αὐλός, πολύφωνος, πολυκαμπής, πολυμελής· Πλάτων δὲ καὶ πολύχορδον εἶρηκε τὸν αὐλόν.

68) ἐπὶ δ' αὐλῶν ἐμφυσᾶν καὶ ἐμπνεῖν φαίης ἂν ἢ καταπνεῖν, καὶ καταπέμπειν τὸ πνεῦμα εἰς τὸν αὐλὸν ὑποπιμπλαμέναις ταῖς γνάθοις, ὑποιδούσαις, ἐξεστηκυῖαις, προπετέσι,

15 Radici Colace 1997, 19.

16 Radici-Colace 2000, 274-275. Cfr. *Index auctorum Pollucis Onomasticon libri I-X*, voll. I-III, ed. Bethe, Ericus, Teubner, Stuttgartiae, 1900-1937, III, 1-13.

17 Cfr. Raffa 2008, 188-189.

18 Cfr. Csapo 2004, 217: "the voice of another, of the pipes themselves, is said to emanate from the player's mouth [...]".

19 Cfr. Serra 2008, 42: "In questo senso usiamo, per esempio, il termine 'voce' di un'enciclopedia: è un'intera costruzione culturale che parla, che indica il significato di un termine all'interno di un progetto ben definito."

20 I termini e le espressioni in corsivo saranno da me tradotti e discussi nelle pagine che seguono.

προπιπτούσαις, ὑπωγκωμέναις, πνεύματος πλήρεσι, τῶν ὀφθαλμῶν τραχυνομένων, ὑβριζόντων, ἐξαιμασσομένων, ἢ ἀπράγμονι τῷ προσώπῳ, ἀβασανίστῳ, ἀγνοοῦντι τὴν κάθοδον τοῦ πνεύματος·

69) καὶ γὰρ τοιαῦτα ἔστιν εἰπεῖν, εἰ αὐλητὴν ἐπαινοῖς ῥοθίῳ μὲν τῷ φυσήματι χρώμενον, διὰ δὲ μέγεθος καὶ τόνον καὶ ἰσχὺν πνεύματος οὐκ ἐνοχλοῦντα τὸ πρόσωπον εἰς ἀταξίαν. [...]

70) [...] τῶν δ' ἄλλων αὐλῶν τὰ μέρη γλώττα καὶ τρυπήματα καὶ βόμβυκες καὶ ὄλμοι καὶ ὑφολμία. καὶ φορβειὰ δὲ προσήκει τοῖς αὐλοῦσι, καὶ τὸν τῇ φορβειᾷ κατελιγμένον ἔλεγον ἐμπεφορβειωμένον.

71) [...] ὁ δὲ τοῖς αὐλοῖς χρώμενος αὐλητὴς καὶ κεραύλης κατὰ τὸν Ἀρχίλοχον, τριηραύλης, αὐλητρίς. εἴποισ δ' ἂν αὐλητὴν ἐπαινῶν σοφός, ἐμμελής, δεξιός. ἀλλὰ ταῦτα μὲν καὶ ἐπὶ τῆς ἄλλης ῥηθείῃ μουσικῆς·

72) ὁ δ' ἔστιν ἴδιον, εὐπνους, μέγα φυσῶν, μέγα πνέων, ἀδρόν, ἔντονον, ἰσχυρόν, ῥόθιον, βίαιον, ἡδύπνουν· τὸ γὰρ λιγύπνουν ποιητικόν. γλυκὺ δὲ πνεῦμα, λιγυρόν, γοερόν, ἐπαγωγόν, γοῶδες, θρηνῶδες. τὸ δὲ πνεῦμα καὶ φύσημα καὶ αὐλημα. ἀπόδεξαι καὶ τὴν αὐλητοῦ εὐχειρίαν καὶ τὴν ταχυχειρίαν καὶ τὴν εὐχέρειαν. κοινὰ δὲ τὰ πλείω τούτων καὶ πρὸς τὸν αὐλὸν ἐκεῖνος δ' οὐ μόνον εὐπνους ἀλλὰ καὶ εὐγλωττος εὐστομος πυκνὸς συνεχής,

73) ὥσπερ ὁ μὲν φαῦλος αὐλητὴς ἄπνους ἀσθενὴς ἀηδὴς ἀγλευκῆς, ὁ δὲ φαῦλος αὐλὸς καὶ ἀγλωττος καὶ ἄφθογος, ἀραιός, διάβροχος, ἔξαυλος· καὶ ἐξηυλημένοι γλῶτται αἱ παλαιαί. αὐλημα δ' ὄρθιον, ἀφ' οὗ καὶ νόμος ὄρθιος, στερεόν, πλήρες, ἐμμελές, μονόκωλον, πολύτροπον, προσαγωγόν, εὐκαμπές, πολύκαμπτον, γοῶδες, θρηνητικόν, ὀξύ, λιγυρόν, πομπικόν, παροξυντικόν, ἐνόπλιον, πυρριχιστικόν, καὶ σπονδεῖον, τροχαῖον, γαμήλιον, παροίνιον.

Il fiato dell'auleta

Polluce (4.67) denomina ἐμπνεόμενα quegli strumenti che erano suonati per mezzo del fiato (e che la classificazione Hornbostel-Sachs, pubblicata per la prima volta in *Zeitschrift für Ethnologie* nel 1914, ha denominato aerofoni) e distinti dagli ὄργανα κρουόμενα, comprendenti gli strumenti a corda percossi con il plettro e quelli a percussione, secondo una bipartizione basata sulla tecnica esecutiva richiesta dalle differenti caratteristiche fisiche delle due categorie di strumenti.²¹ I termini adoperati solitamente per indicare gli strumenti a fiato sono sempre varianti sui verbi πνέω e φυσάω, con una maggiore ricorrenza della forma ἐμπνευστά. In Poll. 4.59, oltre al participio ἐμπνεόμενα, attestato solo

21 Mathiesen 1999, 162. Per la bipartizione e la trattazione sugli ὄργανα κρουόμενα: Poll. 4.58-64. Cfr. Ps.-Plu. *Vit. Hom.* 2.148 (Kindstrand); Aristid. *Quint.* 2.16. La prima tripartizione in ἐντατά (a corda), καθαπτά (a percussione), ἐμπνευστά (a fiato) appare in Aristox. *fr.* 95 Wehrli *ap.* Ath. 174e.

dal grammatico in riferimento agli strumenti musicali a fiato, sono riportate altre denominazioni possibili: καταπνεόμενα, ὑποπνεόμενα, ἐμφυσώμενα.

Come si può vedere dalla maggior parte delle rappresentazioni vascolari, l'*aulos* richiedeva parecchio sforzo nell'emissione del fiato e grande potenza polmonare. Poll. 4.72 riporta alcune espressioni che si potevano utilizzare nello specifico per lodare un bravo auleta: μέγα φυσῶν e μέγα πνέων ('che soffia con forza'), ἄδρὸν ('pieno'), ἔντονον ('energico'), ἰσχυρόν ('vigoroso'), ῥόθιον ('risonante'), βίαιον ('robusto'), ἡδύπνουν ('che soffia con dolcezza').²²

Al riguardo è interessante leggere Ps.-Arist. *Aud.* 800b20-27, in cui si tratta dei suoni prodotti dalle creature con colli lunghi—oche, gru, galli—e si istituisce un paragone interessante tra la trachea di queste e il tubo dell'*aulos*:

Ἡ δὲ ἀρτηρία μακρὰ μὲν ὅταν ᾗ καὶ στενὴ, χαλεπῶς ἐκπέμπουσιν ἔξω τῇσιν φωνῇν καὶ μετὰ βίας πολλῆς διὰ τὸ μῆκος τῆς τοῦ πνεύματος φορᾶς. [...] μάλλον δὲ τοῦτο καταφανές ἐστιν ἐπὶ τῶν αὐλῶν· πάντες γὰρ χαλεπῶς πληροῦσι τοὺς βόμβυκας καὶ μετὰ συντονίας πολλῆς διὰ τὸ μῆκος τῆς ἀποστάσεως.²³

Certamente non si doveva esagerare nello sforzo di emissione, altrimenti poteva capitare quello che accadde allo sventurato auleta Harmonides: alla sua prima esibizione soffiò in modo così sfrontato ed esagerato che esalò il suo ultimo respiro nell'*aulos* (φιλοτιμότερον ἐμφυσῶν ἐναπέπνευσε τῷ αὐλῷ).²⁴

Accanto a tre verbi generici indicanti l'atto del soffiare, Polluce 4.68 indica alcune espressioni specifiche riferibili a due distinte tecniche di emissione del fiato adottate dagli auleti. La prima, quella propria dell'auleta meno abile, si caratterizza per una distorsione dei lineamenti del suonatore provocata dall'incapacità di controllare e gestire la costanza e la potenza del soffio: '[...] trasmettere il fiato nell'*aulos* riempiendo le guance, gonfiandole, sollevandole, rendendole prominenti, sporgenti, rigonfie, piene di fiato, con gli occhi irritati, fuori dalle orbite, iniettati di sangue'. La seconda, invece, prevede che

22 Cfr. Ps.-Arist. *Aud.* 801b32-40 e 802a7-12. Sul ruolo dei polmoni nel determinare variazioni nella qualità del suono (μαλακός/σκληρός) di voce umana o *aulos*, vd. Ps.-Arist. *Aud.* 803a5-27 e Barker 1989, 105, n. 29; 104, n. 31.

23 'Con una trachea lunga e stretta, si emette la voce solo con difficoltà; per la lunghezza del tratto che il fiato deve percorrere è necessaria inoltre molta forza. [...] Ancora più chiaro è il caso degli *auloi*: chi li suona riempie (di fiato) le canne sempre con difficoltà e con molto sforzo, a causa della lunghezza del tratto' (trad. M.F. Ferrini).

24 Lucianus, *Harm.*

l'esecutore suoni 'con volto inerte, senza provare sofferenza, che non si accorge del soffio di fiato'.²⁵

Il retore non fa cenno alle questioni inerenti al mito, poiché il suo interesse principale è pratico e tecnico e consiste nell'indicare quali termini si possono riferire al campo semantico dell'oggetto della trattazione. Tuttavia, la realistica descrizione in Poll. 4.68 non può non ricordare l'immagine di Atena che, specchiandosi nell'acqua, vede il proprio volto deturpato a causa del soffiare nello strumento da lei stessa inventato.²⁶ Al riguardo, Serra (2011, 98) scrive: "[...] l'idea dello sfiguramento legato all'irrompere della continuità rimanda a un'immagine della cultura greca, al volto enfiato e grottesco dell'auleta che soffia, un'immagine mortifera connessa al volto e all'urlo di una Gorgone (del resto la stessa Atena, dopo aver inventato l'*aulos* lo getta via, perché suonare quello strumento gonfia il volto e fa sporgere gli occhi, evocando la fisiognomica della Gorgone)."²⁷

Nell'immaginario comune, a questa esteriorità stravolta si contrapponeva quella posata e aggraziata propria dei suonatori di strumenti a corda, secondo la rivalità tra le due classi di strumenti che prese piede ad Atene a partire dal v sec. a.C.. Sebbene questa opposizione fosse essenzialmente determinata da ragioni di ordine politico, ideologico e culturale, essa non era priva di legami con la natura reale o percepita dell'*aulos*.²⁸ In Plu. *Alc.* 2.4-5 Alcibiade individua le due principali limitazioni connesse con la struttura e con la pratica esecutiva dello strumento: oltre a privare il suonatore della sua identità, rendendolo irriconoscibile per lo sforzo, l'*aulos* blocca la bocca escludendo la possibilità di servirsi della parola, del *logos*, il primo strumento di espressione del cittadino libero.²⁹

25 Cfr. Philostr. *VA* 5.21: εὐστομία δέ, ἣν τὰ χεῖλη ἐνθήμενα τὴν τοῦ αὐλοῦ γλῶτταν μὴ πιμπραμένου τοῦ προσώπου αὐλῆ, 'corretta imboccatura si ottiene se le labbra formano il suono applicandosi alla lingua del flauto, senza che si gonfino le gote' (trad. D. Del Corno).

26 Il mito è riportato in: Melanipp. *PMG* 758 *ap.* Ath. 14.616e; Arist. *Pol.* 1341b2-6; Plu. *De cohib. ira* 456b. L'origine greca dell'arte auletica è attestata anche da Pi. *P.* 12. Per il motivo del gonfiore delle gote, cfr. Pl. *Poen.* 5.7: dietro l'offerta della sua suonatrice di tibia da parte del lenone Lico, il *miles* Antamenide risponde: *Nil moror tibicinam./ Nescias utrum ei maiores buccaene an mammae sient* (vv. 1415-1416).

27 Cfr. Vernant 1995, 198-202; Csapo 1997, 257; Csapo 2004, 217.

28 Csapo 2004, 217. Per una trattazione relativa all'*aulos* e al suo ruolo a livello religioso e sociale, vd. Wilson 1999.

29 Cfr. x. *An.* 1.2.8; Arist. *Pol.* 1341a24-25; D.S. 3.59.2-5; Plu. *QC* 7.8 (713d). Così Csapo (2004, 217): "The pipes thus obliterate both reason and individuality." Vd. Wilson 1999, 85-95 sull'importanza di Alcibiade come figura di collegamento, nell'ambito del discorso critico sull'*aulos*, tra la problematica di v sec. a.C. e la riflessione filosofica più tardi teorizzata.

Tornando a Poll. 4.72, tra le espressioni più specifiche (ὁ δ' ἔστιν ἴδιον) indicanti buone capacità polmonari, troviamo l'aggettivo εὖπνους, 'che respira bene', applicabile a un auleta abile, così come a un *aulos* ben fatto, dalle cui canne il suono fluisce liberamente.³⁰ In Hp. *Prog.* 15.11 εὖπνοος indica il fatto di avere una respirazione libera da ostruzioni e Philostr. *VA* 5.21 definisce così la nozione di εὖπνοια: ἦν τορὸν καὶ λευκὸν ἦ τὸ πνεῦμα καὶ μὴ ἐπικτυπῇ ἢ φάρυγξ, τοῦτ' ἄρ' ἔοικε φθόγγῳ ἀμούσῳ.³¹

Anche l'aggettivo λιγύπνουν, di uso poetico (Poll. 4.72), fa riferimento a un'emissione pulita del fiato. Per comprendere che cosa Polluce voglia esprimere esattamente con questo termine è utile rifarsi a Ps.-Arist. *Aud.* 804a21-25, in cui le voci λιγυραί sono definite λεπταὶ καὶ πυκναί, 'sottili e compatte', come quelle di cicale e usignoli, nitide e prive di rumori estranei che le accompagnino.³² Le qualità essenziali espresse dall'aggettivo λιγύς sembrano essere la chiarezza e la purezza del suono, libero da asprezza e 'raucedine', così come il fiato dell'auleta lodevole.

Molto interessante è che Poll. 4.72-73 utilizzi aggettivi simili (quando non gli stessi) per descrivere l'esecutore e lo strumento, dichiarando: 'la maggior parte di queste caratteristiche che riguardano l'auleta sono comuni anche allo strumento'. Infatti, l'*aulos*, similmente al buon auleta, può essere εὖπνους ('che suona bene') e possedere un suono bello e intonato, pieno e compatto, continuo e non interrotto (εὐγλωττος, εὐστομος, πυκνός, συνεχής).³³ Altrimenti, come l'auleta mediocre si può definire ἄπνους ('sfiatato'), ἀσθενής ('debole'), ἀηδής ('sgradevole') e ἀγλευκής ('privo di dolcezza'), così l'*aulos* διάβροχος ('marcio') ed ἔξαυλος ('rotto') risulterà ἄγλωττος, ἀφθογγος ('stonato', letteralmente 'senza voce') e ἀραιός ('esile').³⁴

30 Cfr. Longo, *Dafni e Cloe* 2.35.2: ἀπεπειράθη τῶν καλᾶμων εἰ εὖπνοοι. In questo caso il riferimento è alle canne della siringa che Fileta saggia per verificare che rispondano bene al soffio e concedano libero passaggio al fiato.

31 '[Buon fiato si ha] quando l'emissione sia nitida e chiara, e la faringe non emetta rumore, perché altrimenti si produce un suono che non ha nulla di musicale' (trad. D. Del Corno).

32 West 1992, 42.

33 Per la pienezza del suono come condizione di udibilità e chiarezza, vd. Ps.-Arist. *Aud.* 801b28 e 30, 802a7-12; cfr. 802b18-23; anche le ance dello strumento dovevano essere πυκνάς καὶ λείας καὶ ὁμαλὰς, oltre che inumidite con la saliva, per produrre un suono gradevole.

34 L'aggettivo διάβροχος indica un *aulos* logorato dall'uso, il cui legno è diventato marcio (cfr. E. *Ba.* 1051). Per ἔξαυλος cfr. Poll. 4.67 (ἔξαυλον, ἐξηλεμένος) e Poll. 4.73, dove le ance vecchie sono dette ἐξηλημέναι ('logorate dall'uso'). L'aggettivo ἀραιός si può tradurre con 'sordo, scarsamente risonante', cfr. (in antitesi con πυκνός) Ps.-Arist. *Aud.* 803b28; per gli

In merito a quanto si diceva inizialmente sulla relazione tra strumento e suonatore 'strumentalizzato' dalle leggi esecutive dello strumento, è rilevante notare come Polluce istituisca a livello terminologico un paragone tra la buona funzionalità del corpo dello strumento (ancia più tubo) e quella dell'apparato respiratorio dell'auleta, entrambi attraversati da una colonna d'aria.³⁵

Pensare metaforicamente all'*aulos* come a un'appendice del fiato dell'auleta, a un'estensione del suo corpo, non sembra poi così fuori luogo.

La respirazione circolare

Le espressioni indicanti regolarità e compostezza facciale riportate da Poll. 4.68 sono utilizzabili 'se si vuole lodare l'auleta che, pur soffiando energicamente, non altera il volto in modo eccessivo a causa della grandezza, della tensione e del vigore del fiato' (Poll. 4.69).

Non possiamo affermare con certezza che Polluce stia qui facendo riferimento alla respirazione circolare; tuttavia, osserviamo ancora oggi che quando il suonatore la pratica non sembra apparire affaticato nel respirare e provato dallo sforzo, anzi, è in grado di continuare la sua esecuzione per lungo tempo.³⁶ Questa complessa tecnica, detta anche 'respirazione a fiato continuo', permette ai suonatori di strumenti a fiato di emettere un flusso sonoro continuo, senza pause. La capacità di poter soffiare senza interrompersi dipende dal fatto che durante l'inspirazione toracica il cavo buccale funge da serbatoio, da cui il suonatore spinge l'aria comprimendo le guance. Esse si sollevano e si abbassano ritmicamente, come dei mantici, senza che a questo alternarsi corrisponda alcuna variazione d'intensità nel canto, che fluisce costante e senza pause.

West ipotizza che la respirazione circolare fosse conosciuta in antichità come una tecnica di origine araba, sulla base di una famosa espressione proverbiale greca, Ἀράβιος αὐλός, applicabile a una persona loquace che parla senza pausa.³⁷ Inoltre, secondo Zen. 2.39, il detto sarebbe nato dall'usanza

elementi ἀραιότερα ('maggiormente porosi') come scadenti veicoli di trasmissione sonora, cfr. Ps.-Arist. *Aud.* 802a12-17 e *Pr.* 899b25-36.

35 Poll. 4.72 specifica che il termine πνεῦμα ('respiro, fiato') è sinonimo sia di un soffio in generale (φύσημα) sia del suono emesso da un *aulos* (αὐλημα).

36 Sachs (1980, 94) suggerisce che la tecnica adottata dagli antichi suonatori di *aulos* può essere raffrontata a quella praticata oggi dai suonatori di *launeddas* sarde; al riguardo vd. Brand 2002.

37 West 1992, 107. Cfr. Men. fr. 31 K.-A. e Poll. 6. 120.

tipicamente araba di continuare a suonare l'*aulos* per lassi di tempo estesi, anche per tutta la notte, recando non poco fastidio agli sventurati ascoltatori.³⁸

Un altro indizio a favore dell'impiego della respirazione circolare da parte degli auleti greci potrebbe essere l'uso di un particolare accessorio, la *φορβεία*, menzionata da Poll. 4.70 dopo i nomi delle varie sezioni che compongono gli *auloi*.³⁹ Si trattava di una sorta di museruola costituita da una fascia di cuoio che passava sopra la bocca ed era fermata da un'altra cinghietta dietro alla testa; all'altezza della bocca la fascia aveva due fori larghi abbastanza da potervi introdurre le due canne dello strumento.⁴⁰ Secondo Plu. *De Cohib. Ira* 456b-c, che cita un passaggio di Simonide (fr. 177), la *φορβεία* serviva a mascherare o attenuare il rigonfiamento delle guance e, di conseguenza, la deformazione del viso. Tuttavia, questa spiegazione così legata al mito del rifiuto dell'*aulos* da parte di Atena, e appoggiata da numerosi studiosi nel passato, appare sospetta e poco soddisfacente, anche perché le guance potevano essere tenute contro i denti senza alcun ausilio del genere.⁴¹

Sembra più sensato pensare che la *φορβεία* agevolasse l'impiego della respirazione circolare: il musicista inspirava l'aria attraverso il naso e manteneva la continuità del suono poiché la bocca restava chiusa.⁴² Con due ance distinte, la difficoltà di mantenere una presa salda era molto più grande e indossare la *φορβεία* permetteva all'esecutore di mantenere un'imboccatura rilassata perché essa stessa serrava la bocca e teneva le labbra assieme contro la pressione del fiato.⁴³ Un'imboccatura rilassata a sua volta avrebbe evitato la tendenza di una presa serrata a stringere le ance—o trattenerle dal vibrare assieme—e permesso alle labbra di esercitare aggiustamenti sensibili nel premere sulle ance.⁴⁴

Il fatto che a volte gli auleti ritratti nelle rappresentazioni iconografiche non indossino la *φορβεία* è spiegabile con l'ipotesi che per eseguire brevi e semplici frasi essa non fosse indispensabile, ma lo fosse diventata in seguito all'innovativo e complesso stile introdotto dalle competizioni auletiche.⁴⁵ Inoltre,

38 Nella Suda, s.v. Ἀράβιος αὐλός, l'aggettivo si spiega con il fatto che la maggior parte degli auleti erano schiavi spesso di origine araba. Vd. Tosi 2006, 94-95.

39 Per una panoramica sulle diverse interpretazioni che in antichità e in tempi moderni sono state date riguardo all'utilità della *φορβεία*, vd. Bélis 1986. In particolare, è attribuita all'accessorio una funzione regolatrice del fiato in: S. *TrGF* fr. 768; Plu. *De Cohib. Ira* 456b-c; Schol. Ar. V. 582; Suid. s.v. φόρβειον. Cfr. Wilson 1999, 70-72; Csapo 2004, 221.

40 Sachs 1980, 157; Wilson 1999, 70.

41 Landels 1999, 31; Mathiesen 1999, 219; Csapo 2004, 221, n. 62.

42 Csapo 2004, 221.

43 Cfr. Hsch. s.v. φορβεία.

44 West 1992, 84, 95; Barker 2002, 72. Cfr. Ps.-Arist. *Aud.* 801b32-40 e 804a12-14.

45 Mathiesen 1999, 222.

bisogna sottolineare che solitamente gli auleti senza φορβεία appaiono raffigurati in scene simposiali, quindi in contesti dove, probabilmente, non era necessario esibire un particolare virtuosismo.⁴⁶

L'abilità manuale

[...] ἐμοὶ δὲ πρὸς τοῖς ὑπὸ σοῦ εἰρημένοις καὶ ἐτέρων δοκεῖ ὁ αὐλὸς δεῖσθαι: τῆς τε εὐπνοίας καὶ τῆς εὐστομίας καὶ τοῦ εὐχειρα εἶναι τὸν αὐλοῦντα [...]. τὸν δὲ εὐχειρα αὐλητὴν πολλοῦ ἡγοῦμαι ἄξιον, ἣν μήτε ὁ καρπὸς ἀπαγορεύῃ ἀνακλῶμενος μήτε οἱ δάκτυλοι βραδεῖς ὧσιν ἐπιπέτεσθαι τοῖς φθόγγοις, καὶ γὰρ τὸ ταχέως μεταβάλλειν ἐκ τρόπου ἐςτρόπον περὶ τοὺς εὐχειράς ἐστι μᾶλλον. εἰ δὴ ταῦτα πάντα παρέχεις, θαρρῶν αὐλεῖ, ὦ Κάνε, μετὰ σοῦ γὰρ ἡ Εὐτέρπη ἔσται.⁴⁷

Con queste parole Apollonio si rivolge al celebre auleta Cano in Philostr. *VA* 5.21. Oltre a una buona respirazione e a una corretta imboccatura, come abbiamo già avuto modo di verificare, un suonatore di *aulos* apprezzabile doveva possedere un alto grado di abilità manuale. Per esprimere questa qualità, Poll. 4.72 indica tre termini sinonimici: εὐχειρία ('agilità delle mani'), ταχυχειρία ('velocità delle mani') ed εὐχέρεια ('prontezza delle mani').⁴⁸

I fori praticati sugli *auloi* prendevano il nome di τρυπήματα (Poll. 4.70 e 4.80) o τρήματα (Ps.-Arist. *Pr.* 919b4) e originariamente erano quattro superiori più un quinto sottostante per il pollice, posizionati in maniera simile sulle due canne. A volte sui tubi più lunghi appariva anche un sesto foro al grave sempre aperto (*vent-hole*) che aveva la funzione di stabilizzare l'intonazione delle note più gravi.⁴⁹ Riguardo alla tecnica esecutiva, generalmente i brani per *aulos* richiedevano la distribuzione delle note melodiche tra le due canne e,

46 West (1992, 89) osserva che spesso si tratta di suonatrici, che verosimilmente soffiavano in modo meno vigoroso degli uomini; cfr. Poll. 4.72: ἡδύπνουσιν ('che soffia con dolcezza') e, anche se con riferimento alla σάλπιγξ, Ps.-Arist. *Aud.* 803a24-27.

47 'Ma a me pare che l'*aulos* abbia bisogno di qualcos'altro, oltre a ciò che hai detto: ossia *buon fiato, corretta imboccatura e destrezza di dita* da parte del flautista [...]. La *destrezza delle dita*, poi, è molto importante per un flautista: essa si ha quando le articolazioni non rifiutano di piegarsi e le dita non sono pigre a volare sulle note, infatti la rapidità dei passaggi da un tono all'altro è la caratteristica principale dei flautisti dotati di buona mano. Se hai tutte queste doti, puoi suonare con sicurezza, o Cano, poiché Euterpe sarà con te' (trad. D. Del Corno, leggermente modificata). Cfr. Poll. 4.71: 'Se si vuole lodare un auleta lo si può definire sapiente, intonato, abile'.

48 Cfr. Telest. *PMG* 805c ap. Ateneo 617a (σὺν ἀγλαᾶν ὠκύτατι χειρῶν); Poll. 2.148.

49 West 1992, 89; Citelli 2001, 443, n.7.

negli strumenti più evoluti, l'impiego di alcuni meccanismi durante la *performance*: una singola mano non sarebbe mai stata capace di controllare un'intera ottava.⁵⁰ Secondo Poll. *Onom.* 4.80, Diodoro di Tebe aumentò il numero dei fori (πολύτρητον δ' αὐτὸν ἐποίησε) e creò delle aperture laterali nello strumento.⁵¹ Ancora, Paus. 9.12.5 riferisce che Pronomo, virtuoso dell'*aulos* vissuto tra il 470 e il 390 a.C. anch'egli di Tebe, apportò delle migliorie tali da poter suonare su uno strumento le tre *harmoniai* in uso al suo tempo (dorica, frigia e lidia), mentre precedentemente per ogni singola *harmonia* si doveva usare un *aulos* distinto.⁵² Dalle fonti letterarie non si ricavano molti dettagli riguardo alle modifiche di Pronomo, ma probabilmente egli incrementò ulteriormente il numero dei fori dell'*aulos* e lo fornì di collari di metallo mediante i quali si poteva chiudere ogni foro, variando l'accordatura secondo le esigenze dell'esecuzione.⁵³

Nei suoi numerosi studi, Stefan Hagel ha gettato luce sulla natura dell'invenzione di Pronomo e ha spiegato come gli strumenti professionali fossero dotati di un sistema di sottili fascette metalliche rotanti orizzontalmente e asticelle bronzee collegate a collari che scorrevano verticalmente lungo la canna (per i fori nella parte più bassa dello strumento).⁵⁴ Basta pensare a questo complesso meccanismo per capire che non doveva essere per nulla semplice e immediato, nel momento in cui si modulava, far ruotare gli anelli e far scivolare le asticelle per predisporre lo strumento al cambio di *harmonia*. Questa veloce operazione meccanica era infatti parte della pratica esecutiva illustrata da Philostr. *VA* 5.21: qui la modulazione senza dubbio implica un'azione meccanica, altrimenti non si porrebbe alcuna questione di velocità.⁵⁵

50 Hagel 2009¹, 337.

51 Hagel (2009¹, 349, n. 56) ipotizza che l'invenzione attribuita a Diodoro possa essere identificata su un esemplare di *aulos* proveniente da Pergamo, in cui i fori nella parte inferiore dello strumento, aperti o chiusi tramite un meccanismo scorrevole, non risultano allineati con quelli destinati alle dita ma sono appunto laterali. Cfr. West 1992, 87; Barker 2002, 65.

52 Pausania descrive una statua del celebre artista posta nell'agorà di Tebe, un luogo pubblico di vitale importanza: ciò dimostra il prestigio attribuito all'auletica nella città, che infatti vantava una famosa discendenza di auleti; al riguardo vd. Roesch 1995; Berlinzani 2004, 120-147. Ateneo nomina Pronomo di Tebe in due passi: in 4.184d lo dice maestro di Alcibiade e in 14.631e ne parla in relazione agli stravolgimenti attuati dalla rivoluzione della cosiddetta 'Nuova Musica' nel V a.C.. Cfr. Hagel 2009¹, 378, n. 34.

53 Vd. Comotti 1991, 72; West 1992, 87; Landels 1999, 36-38; Byrne 2000, 282; Barker 2002, 62-64; Berlinzani 2004, 128-129; Csapo 2004, 219.

54 Hagel 2009¹, 337. In particolare sui meccanismi impiegati per aprire e chiudere i fori di un *aulos*, vd. Hagel 2004; 2008; 2009¹, 393-413, 290-292, 319-323, 332-364; 2009²; 2012, 500-501.

55 Hagel 2009¹, 337, n. 28.

Dunque, a partire dal v e specialmente nel iv sec. a.C., agli auleti cominciò ad essere richiesto un elevato livello di preparazione tecnica e di virtuosismo, non comparabile al grado di apprendimento musicale dilettantistico ammesso da Aristotele (*Pol.* 1340b20-1341b1) per l'educazione degli uomini liberi.⁵⁶ Secondo il filosofo, la pratica assidua di uno strumento che, come l'*aulos*, richiedeva una competenza specifica (1341a18-19: τεχνικὸν ὄργανον) e una notevole perizia manuale (1341b1: τὰ δεόμενα χειρουργικῆς ἐπιστήμης) non sarebbe stata indicata a fini pedagogici e avrebbe finito per rendere il corpo 'un puro strumento meccanico' (1341a7: βάνυσον).

Ad ogni modo i nuovi ausili tecnici permettevano all'auleta di cambiare ed espandere lo schema degli intervalli disponibile su un singolo *aulos* e perciò di suonare la complessa, eccitante e virtuosistica musica così comunemente associata allo strumento.⁵⁷

Inoltre, l'esecutore poteva abbassare o innalzare l'intonazione dei suoni impiegando le tecniche del *cross-fingering* e della copertura parziale dei fori.⁵⁸ Come leggiamo in Aristox. *Harm.* 41.31-43.24, i suoni prodotti da un *aulos*, uno strumento già così variabile nella sua fabbricazione e nella sua natura, cambiavano a seconda degli espedienti adottati per produrli: oltre che con le dita, era possibile alzare e abbassare i toni, rispettivamente, allontanando o avvicinando le canne dello strumento oppure forzando o trattenendo il soffio.⁵⁹ Quindi, diversamente da quanto accadeva per gli strumenti a corda, che una volta accordati producevano suoni fissi, nel caso degli *auloi* i normali metodi di esecuzione potevano introdurre ulteriori variazioni nel suono rispetto all'intonazione di base.⁶⁰

56 Barker 2002, 65.

57 Mathiesen 1999, 190-191.

58 La tecnica del *cross-fingering* consentiva di modificare l'intonazione di una nota occludendo uno o più fori posizionati più in basso lungo lo strumento; cfr. West 1992, 95.

59 Barker 1989, 158, n. 48 e n. 49; West 1992, 95-96. Per il primo metodo, cfr. Plu. *Non Posse Suaviter* 1096a-b: probabilmente la variazione dipendeva dal modo in cui questi movimenti modificavano la posizione delle due ance doppie tra le labbra del suonatore; per il secondo, cfr. Ps.-Arist. *Aud.* 804a.

60 Barker 1989, 158, n. 50; Csapo 2004, 218-220. Cfr. Pl. *Phlb.* 55e-56a. Hagel (2004, 373-374) afferma che certamente i suonatori esperti avrebbero potuto suonare (aggiustando l'intonazione con la pressione delle labbra) certe scale anche su *auloi* che per loro natura non ne prevedevano l'esecuzione, tuttavia, solitamente gli strumenti erano costruiti in modo tale da produrre una determinata scala (come dimostrano le diverse disposizioni dei fori su differenti strumenti).

La voce dell'aulos

Poll. 4.67 riporta alcuni interessanti aggettivi attribuibili all'*aulos*: πολύφθογγος ('dai molti suoni'), πολύφωνος ('dalle molte voci'), πολυκαμπής ('flessibile'), πολυμελής ('dai molti canti').⁶¹ Questi composti con il prefisso πολύ- denotano le caratteristiche distintive dello strumento: la capacità di produrre una vasta gamma di suoni e la versatilità esecutiva.⁶²

In Ps.-Plu. *De mus.* 1141c leggiamo che Laso di Ermione 'adattando i ritmi al movimento del ditirambo, prendendo a modello l'ampia gamma di suoni dell'aulo e utilizzando un numero maggiore di note disseminate lungo la scala, rivoluzionò la musica precedente'.⁶³ La πολυφωνία era un tratto tipico dell'*aulos* e lo si può apprendere anche da Pindaro, che in *O.* 7.12, in *I.* 5.27 e in *P.* 12.19-20 attribuisce allo strumento l'aggettivo πάμφωνος, 'con tutte le voci'.⁶⁴ Allo stesso fenomeno fa riferimento anche l'aggettivo πολύχορδος, 'dalle molte corde', che ricorre associato all'*aulos* in fr. adesp. 947 *PMG* (=Simon. fr. 46 Bergk) e, come riferisce Poll. 4.67 (πολύχορδον), in Pl. *R.* 399d4 (πολυχορδότατον).⁶⁵

In particolare, Platone definisce l'*aulos* πολύχορδος, cioè in grado di emettere una moltitudine di suoni, e παναρμόνιος, ovvero capace di suonare in tutte le *harmoniai* (*R.* 399d3-5).⁶⁶ Molto probabilmente il filosofo aveva in mente l'*aulos* 'panarmonico' di Pronomo di Tebe, uno strumento che per la sua potenzialità di modulare tra le diverse *harmoniai*, similmente agli strumenti policondi, quali arpe triangolari e pectidi (Pl. *R.* 399c10-d1), era bandito dallo Stato platonico.⁶⁷ Platone, dunque, riconosceva la 'pericolosità' della voce dell'*aulos*

61 Cfr. Raffa 2008, 188-189: "Nell'elenco del lessicografo i termini sono ovviamente decontestualizzati; tuttavia, dato che gran parte del materiale lessicale confluito in Polluce proviene dalla poesia comica, e considerato che la critica della nuova musica era un vero e proprio topos della commedia antica (in specie di Aristofane), si può ritenere negativa la connotazione generale di questi termini."

62 Cfr. Csapo 2004, 216-221 per una presentazione dei tratti distintivi dello strumento.

63 Trad. G. Pisani-L. Citelli.

64 Cfr. Barker 1984, 132, n. 29. In Pl. *P.* 12.19-20 l'attributo πάμφωνος rinvia all'occasione specifica dell'invenzione del *nomos* policefalo da parte di Atena, ovvero la vittoria di Perseo contro la Gorgone Medusa e il conseguente lamento 'dalle molte voci' delle sorelle Euriale e Steno; cfr. Gentili-Luisi 1995, 7-9.

65 Il fatto che Poll. 4.67 riporti l'aggettivo al grado positivo, e non al superlativo come nel passo platonico, risponde alle regole della lemmatizzazione; al riguardo vd. Tosi 2007², 8-13.

66 Provenza 2010, 146, n. 23. Per un'altra occorrenza dell'aggettivo παναρμόνιος in Platone, cfr. *R.* 404d12.

67 Cfr. Landels 1999, 38. Il rifiuto platonico dell'*aulos* in quanto strumento 'panarmonico' si spiega con la precedente (*R.* 399a3-c6) limitazione delle *harmoniai* utili per la città alle

nei suoi aspetti più peculiari: la mutevolezza, l'indeterminatezza e la ricchezza del suono.⁶⁸

In Poll. 4.67, tra i termini derivati dal sostantivo αὐλός, troviamo un verbo interessante: καταυλεῖν, 'ammaliare suonando l'*aulos*'.⁶⁹ Che il suono dell'*aulos* fosse seducente e capace di trasportare emotivamente l'uditorio lo si ricava da molte fonti, una fra tutte Pl. R. 411a5-411b4, dove ricorre proprio il verbo καταυλεῖν in relazione alla pericolosa capacità della musica per *aulos* di irretire l'anima addolcendo ciò che vi è di irascibile in essa.⁷⁰

Ancora in Polluce, tra i vari aggettivi che si possono riferire al fiato dell'auleta, alla voce dell'*aulos*, per definirne il carattere, vi sono: ἐπαγωγόν (4.72), 'seducente', e προσαγωγόν (4.73), 'attraente'. In particolare, in Poll. 4.73 è fornito un elenco più ampio ed eterogeneo, un vero *cumulus*, di aggettivi riferibili all'αὐλημα, la melodia eseguibile con l'*aulos*.⁷¹ Tralasciando quelli che si ripetono nel significato con gli aggettivi presenti in Poll. 4.72, ne troviamo altri che si possono utilizzare in riferimento alla struttura della composizione (μονόκωλον, πολύτροπον, εὐκαμπές, πολύκαμπτον) oppure, distinti sulla base del ritmo e quindi del carattere, alle occasioni di esecuzione: ὄρθιον, πομπικόν, παροξυντικόν, ἐνόπλιον, πυρριχιστικόν, σπονδείον, τροχάιον, γαμήλιον, παροίνιον.

Merita qualche chiarimento il primo aggettivo della serie, ὄρθιον, da cui sarebbe derivato il *nomos* ὄρθιος, una melodia tanto popolare e famosa nel v sec. a.C. che chiunque sapeva riconoscerla.⁷² Come si ricava dai vv.1150-1153 dell'*Agamennone* di Eschilo, si trattava di "un canto in registro acuto di argomento funesto e luttuoso".⁷³ Oltre che da Polluce 4.73, abbiamo la conferma che il *nomos* facesse parte degli auleatici grazie a Ps.-Plu. *De mus.* 1133e e a uno scolio ad Ar. *Ach.* 16, in cui si specifica come il nome ὄρθιος derivasse dal fatto che il *nomos* fosse energico (εὐτονος) e richiedesse tensione (ἀνάτασις). Il *nomos* ὄρθιος, secondo Brussich (1995, 151, n. 12), indicava un componimento "connotato da un tema descrittivo e da una melodia energica e fortemente emotiva, che l'auleta eseguiva spesso con l'accompagnamento di movenze mimetiche

sole dorica e frigia, le uniche capaci di "imitare i φθόγγοι di uomini valorosi e saggi in tutte le circostanze della vita" (Provenza 2010, 146).

68 Cfr. Serra 2008, 155-157.

69 Cfr. E. *HF* 871 e Pl. *Leg.* 790e.

70 Sul potere persuasivo (nei dialoghi di Platone) e 'perturbante' (in tragedia) dell'*aulos*, sulla sua funzionalità paideutica in grado di generare negli uomini sia una catarsi fisica, durante i riti dionisiaci, sia politico-morale, nel corso delle rappresentazioni teatrali, vd. Provenza 2010. Riguardo al passo platonico in questione, vd. ivi, 146, n.22.

71 Grandolini 2003, 388.

72 Ar. *Eq.* 1279: ὅστις ἢ τὸ λευκὸν οἶδεν ἢ τὸν ὄρθιον νόμον. Vd. anche Poll. 4.65.

73 Grandolini 2010, 460.

del corpo per dare una carica di maggiore realismo alla *performance*". Infatti, le fonti tramandano che, nel IV sec. a.C., esso fu suonato dall'auleta tebano Timoteo e provocò un forte sconvolgimento in Alessandro Magno che assisteva all'esecuzione.⁷⁴ Probabilmente Timoteo apparteneva alla scuola del nuovo ditirambo, in cui si era inserito l'elemento mimetico a seguito della riforma musicale del V sec. a.C., che tanto aveva influenzato la pratica strumentale accentuando il virtuosismo degli auleti.⁷⁵

La *performance* auletica: una sinfonia di movimenti

La visualizzazione dell'esecutore durante la *performance* giocava un ruolo importante nell'apprezzamento della musica.⁷⁶ Da un lato, il musicista poteva restituire un'immagine di depravazione, bruttezza e repulsione a causa delle distorsioni facciali involontarie (che un bravo auleta era in grado di evitare), dall'altro, alcuni auleti erano soliti accompagnare la loro *performance* con particolari movenze del corpo al fine di incrementare l'efficacia della loro esecuzione.⁷⁷ Se il suono dell'*aulos* poteva di per sé essere avvertito come *ἐπαγωγόν*, inoltre, i movimenti, i gesti e le espressioni facciali—quelle eseguite di proposito, non quelle causate dallo sforzo di emissione del

74 Brussich 1995, 149-151; Berlinzani 2004, 135-136. Cfr. Dio Chrys. *Orat.* 1.1-2; Plu. *De Alex. Fort.* 335a; Him. *Or.* 14.3. L'auleta tebano non è da confondere con il citarodo Timoteo di Mileto, noto caposcuola del ditirambo attico e autore dei *Persiani*. Cfr. Brussich 1995, 145-146; ivi, 154-155 per una proposta di articolo monografico sull'auleta Timoteo di Tebe.

75 Brussich 1995, 154; Berlinzani 2004, 139. Cfr. West 1992, 366: "in music as in theatre, public enthusiasm was increasingly focused on the virtuosic skills, personality, and showmanship of the individual performer."

76 Mi piace ricordare alcuni pensieri di Igor Stravinsky tratti dalle sue *Chroniques de ma vie* (1935-1936): "La visione del gesto e del movimento delle varie parti del corpo che producono la musica è una necessità essenziale per coglierla in tutta la sua pienezza. Infatti, ogni musica, dopo esser stata composta, esige ancora un mezzo di esteriorizzazione per essere percepita dall'ascoltatore. In altre parole: la musica ha bisogno di un intermediario, di un esecutore. [...] Va però detto che spesso è preferibile volgere gli occhi da un'altra parte o chiuderli quando una gesticolazione superflua dell'esecutore impedisce di concentrare la nostra attenzione uditiva" (trad. A. Mantelli).

77 Così Schaeffner (1987, 25): "Originariamente la musica strumentale si trova unita alla danza assai strettamente; il canto può forse esistere senza l'invenzione del linguaggio, non così la musica strumentale, che, nelle sue forme più primitive, presuppone sempre la danza; essa è danza."

fiato—risultavano di forte impatto visivo, oltre che emotivo, e contribuivano al crearsi di un'esperienza davvero suggestiva per il pubblico.

Di seguito sono riportati tre passi dai quali è possibile ricavare qualche informazione utile in merito ai comportamenti fisici volutamente messi in atto da auleti professionisti.

All'interno di una sezione dedicata ai danzatori famosi e alle diverse danze regionali, Ath. 1.22c riporta che:

Θεόφραστος (Fr. 718 Fortenbaugh) δὲ πρῶτόν φησιν Ἄνδρωνα τὸν Καταναῖον αὐλητὴν κινήσεις καὶ ῥυθμούς ποιῆσαι τῷ σώματι αὐλοῦντα· ὅθεν σικελίζειν τὸ ὀρχεῖσθαι παρὰ τοῖς παλαιοῖς· μεθ' ὃν Κλεόλαν τὸν Θηβαῖον.⁷⁸

Secondo Teofrasto, dunque, l'introduzione di movimenti del corpo durante la *performance* auletica sarebbe imputabile all'auleta catanese Androne di Catania, responsabile anche del cambiamento di significato del verbo σικελίζειν.⁷⁹ Entrambi gli auleti, Androne e Cleola (nominato Cleofante, pur sempre di Tebe, in Thphr. Fr. 718) dovevano essere vissuti nel v secolo a.C.. Quella di Androne, secondo Fortenbaugh (2014, 194), fu un'innovazione positiva: i suoi movimenti di accompagnamento sono infatti definiti ritmici e non sono descritti come scomposti o inappropriati. Inoltre, si ricordi che gli auleti potevano indossare le κρουπέζαι, particolari calzature con un batacchio attaccato alla suola per battere il ritmo durante la *performance*.⁸⁰

Il caso più famoso di auleta 'in movimento' è certamente quello di Pronomo, riportato da Paus. 9.12.6, che ce ne descrive la statua nell'agorà di Tebe:

78 'Teofrasto inoltre dice che Androne di Catania, suonatore di aulo, per primo *realizzò movimenti ritmici con il corpo mentre suonava l'aulo*; da qui *sikelízein* ('fare alla siciliana') ebbe il significato di 'danzare' presso gli antichi; dopo di lui ci fu Cleola di Tebe' (trad. M.L. Gambato). Cfr. Cic. Leg. 2.39 ([...] *cum ceruices oculosque pariter cum modorum flexionibus torqueant*), Hor. Ars 214-215 (*sic priscae motumque et luxuriam addidit arti / tibicen traxitque vagus per pulpita vestem*).

79 Vd. Roesch 1995, 128; Berlinzani 2004, 121; Csapo 2004, 213.

80 West 1992, 123-124; Di Diglio 2000, 107; Berlinzani 2004, 122. Cfr. Cratino fr. 77; Paus. Gr. Att. K 48; Poll. 7.87, 10.153. Così Schaeffner (1987, 25): "L'uomo batte il suolo coi piedi o con le mani, percuote il suo corpo in cadenza, lo agita parzialmente o interamente per animare gli oggetti e gli ornamenti sonori che indossa."

λέγεται δὲ ὡς καὶ τοῦ προσώπου τῷ σχήματι καὶ τῇ τοῦ παντὸς κινήσει σώματος
περισσῶς δὴ τι ἕτερπε τὰ θεάτρα⁸¹

Come abbiamo visto, Pronomo fu più di un semplice esecutore carismatico, egli fu un maestro del suo strumento capace di estendere la versatilità melodica dell'*aulos* sviluppando nuove tecniche costruttive ed esecutive.⁸² L'auleta è dipinto su un vaso contemporaneo, seduto in una toga ornata, con una corona in testa, mentre suona al centro della sala prove, piena di attori in costumi di scena satirici.⁸³ Purtroppo, delle espressioni facciali e dell'intero movimento del corpo di Pronomo mentre suonava non sappiamo niente, se non che appunto suscitassero grande ammirazione nel pubblico.⁸⁴ Questo atteggiamento istrionesco, l'uso del movimento del corpo per aggiungere espressività alla *performance* si diffuse nel v sec. e divenne usuale nel iv a.C., come anche la tendenza a vestire capi di abbigliamento particolari. Sappiamo che Antigenida, un altro auleta tebano attivo presumibilmente nel primo terzo del iv sec. a.C., fu il primo a indossare un ampio mantello giallo e 'scarpe milesie' durante l'esecuzione.⁸⁵ Questi dettagli sartoriali suggeriscono che nel diti-rambo di questo periodo l'auleta giunse a giocare un ruolo molto più cospicuo che precedentemente.⁸⁶

81 'Si dice inoltre che egli procurava un eccezionale diletto agli spettatori anche *con gli atteggiamenti del volto e con i movimenti di tutto il corpo*' (trad. M. Moggi).

82 West 1992, 366.

83 Napoli, Museo Nazionale H 3240, Cratere a volute attico a figure rosse, 400 a.C. circa. Dell'iconografia e dei contesti di produzione e di ritrovamento del vaso si sono occupati, sotto diversi punti di vista, gli studi contenuti in Taplin, O., Wyles, R. (eds.) 2010. *The Pronomos Vase and its Context* (Oxford): in particolare, Csapo (2010, 79-130) dissocia il famoso musicista Pronomo storicamente esistito da quello raffigurato sul vaso, leggendo nel nome 'Pronomo' una denominazione comune per un auleta; ancora, Wilson (2010, 181-212) passa in rassegna le informazioni in nostro possesso riguardo all'auleta Pronomo, discutendo la sua posizione di icona culturale a Tebe, la sua accoglienza ad Atene e lo status sociale dell'auletica.

84 Vd. Bélis 1986, 210; Roesch 1995, 130-131; Csapo 2004, 213. Berlinzani (2004, 129, n. 54) sottolinea che "il celebre musico sapeva comunque mantenere, pur nella ricca espressività del volto, il decoro". Cfr. Poll. 4.68-69.

85 Suid. s.v. Ἀντιγενίδες. Le 'scarpe milesie' erano "calzature femminili per piedi delicati, ricoperte di fine tessuto di Mileto" (Roesch 1995, 132, n. 48).

86 West 1992, 367; Csapo 2004, 214. L'auleta Pronomo, oltre che per il suo talento, era celebre anche per la sua barba: vd. Ar. Ec. 102; Apostol. CPG 2.244; Suid. s.v. Πρόνομος. Cfr. Roesch 1995, 130; Berlinzani 2004, 128. Così Di Giglio (2000, 44-45): "Accade ancora oggi che un musicista professionista si mostri in pubblico in tutta la sua eccentricità di artista: ogni cosa è 'originale', dall'acconciatura all'abbigliamento."

Ancora, da Senofonte, *Simposio* 6.4, apprendiamo che era costume degli auleti accompagnarsi nel suonare con particolari movimenti. Nel passo in questione Ermogene, sollecitato dalle domande di Socrate, si lamenta dell'impossibilità di intervenire nei fitti discorsi degli altri convitati. Tuttavia, dietro suggerimento di Callia, che fa notare come durante l'esecuzione dell'auleta tutti stiano in silenzio, Socrate esorta il convitato taciturno a parlare al suono dell'*aulos*. Come un canto è reso più dolce dalla melodia di un *aulos*, così il suo discorso risulterebbe più addolcito dal suono dello strumento, specialmente se Ermogene, al modo di un'αὐλητρίς da simposio, si accompagnasse con gesti appropriati alle parole:

[...] οἶμαι γάρ, ὥσπερ ἡ ᾠδὴ ἡδίων πρὸς τὸν αὐλόν, οὕτω καὶ τοὺς σοὺς λόγους ἡδύνεσθαι ἂν τι ὑπὸ τῶν φθόγγων, ἄλλως τε καὶ εἰ μορφάζοις, ὥσπερ ἡ αὐλητρίς, καὶ σὺ πρὸς τὰ λεγόμενα.⁸⁷

Non ci si può dimenticare, d'altro canto, dei giudizi poco benigni, affioranti soprattutto dai testi filosofici, in merito alla pratica auletica e alla sua forte connotazione mimetica. In proposito, per concludere, richiamo due celebri passi aristotelici.

In *Pol.* 1341b8-10 Aristotele, nel delineare l'educazione musicale degli uomini liberi, esprime la sua opposizione all'istruzione professionale nella conoscenza degli strumenti e nel loro uso, intendendo per istruzione professionale quella che ha di mira la preparazione per gli agoni.⁸⁸ Secondo il filosofo (1341b10-15) chi pratica l'arte in questo senso non mira alla propria virtù, ma al piacere volgare (φορτικῆς) degli ascoltatori; proprio per questo la prestazione musicale non è adatta agli uomini liberi ma a coloro che la esercitano per la retribuzione (βαναύσους). Infatti, questi 'mestieranti' finiscono per uniformarsi ai caratteri

87 'Penso, infatti, che, come il canto è più gradevole se accompagnato dall'*aulos*, così i tuoi discorsi sarebbero resi più piacevoli dal suono della musica, soprattutto se anche tu, come la danzatrice, accompagnassi alle tue parole i gesti' (trad. L. De Martinis). Cfr. *X. Smp.* 2.1 (αὐλητρίδα ἀγαθὴν), dove Barker (1984, 118, n. 4) commenta: "The *auletris* or *aulos* girl was the staple of all Greek after-dinner entertainment: she would usually dance as she played." Sul doppio ruolo (di musiciste e prostitute) delle suonatrici di *aulos* a simposio, sulla loro bassa posizione sociale e sul cristallizzarsi di queste figure in stereotipo letterario, vd. Rocconi 2006.

88 Vd. Wilson 1999, 93-95. Per approfondimenti su Arist. *Pol.* 8, vd. gli atti dell'8th Seminar for Ancient Greek & Roman Music "Music in Aristotle Politics Book VIII" (3-10 July 2011, Ionian University, Corfù) consultabili al seguente link: <http://conferences.ionio.gr/sagrm/2011/en/proceedings>; in particolare per Arist. *Pol.* 1340b20-1341b18, vd. il commento di Egert Pöhlmann.

corrotti dello spettatore φορτικός, lasciandosi andare a movimenti inopportuni durante l'esecuzione (*Pol.* 1341b15-18):

ὁ γὰρ θεατὴς φορτικός ὢν μεταβάλλειν εἴωθε τὴν μουσικὴν, ὥστε καὶ τοὺς τεχνίτας τοὺς πρὸς αὐτὸν μελετῶντας αὐτοὺς τε ποιοὺς τινὰς ποιεῖ καὶ τὰ σώματα διὰ τὰς κινήσεις.⁸⁹

Alla base di questo passo aristotelico vi sono le considerazioni di Platone in *Lg.* 659b-c: il fatto che la responsabilità di giudicare una musica sia affidata alla massa degli spettatori comporta la corruzione dei compositori stessi, poiché costoro, componendo per il piacere depravato dei loro giudici, fanno degli spettatori i loro insegnanti, e ciò finisce per corrompere ulteriormente anche il piacere dell'uditorio.

Il rapporto pubblico-composizione è richiamato anche in *Arist. Po.* 1461b26-32⁹⁰: nel delineare il confronto tra imitazione epica e imitazione tragica, Aristotele "si rifà alla classificazione delle forme poetiche, fondata sulla qualità del pubblico che le preferisce, di Platone (*Lg.* 658d)"⁹¹ e istituisce un parallelo tra i cattivi interpreti sulla scena e quegli auleti, deprecabili, che durante l'esecuzione si concedono a una sorta di danza:

ἦττον φορτικὴ βελτίων, τοιαύτη δ' ἡ πρὸς βελτίους θεατὰς ἐστὶν αἰεί, λίαν δῆλον ὅτι ἡ ἅπαντα μιμουμένη φορτικὴ· ὥς γὰρ οὐκ αἰσθανομένων ἂν μὴ αὐτὸς προσθῇ, πολλὴν κίνησιν κινεῖται, οἷον οἱ φαῦλοι αὐληταὶ κυλιόμενοι ἂν δίσκον δέη μιμεῖσθαι, καὶ ἔλκοντες τὸν κορυφαῖον ἂν Σκύλλαν αὐλῶσιν.⁹²

Lucas (1968, 252), nel commento al passo, scrive che la 'super recitazione' diffusa in tragedia era ben illustrata dalle esecuzioni ditirambiche, in cui l'auleta

89 'Infatti lo spettatore *volgare* di solito fa peggiorare la musica, e perciò i musicisti, che di lui tengono conto, *diventano anch'essi peggiori e rovinano il loro corpo con movimenti scomposti*' (trad. C.A. Viano).

90 Si noti nel passo la ricorrenza dell'aggettivo φορτικός; cfr. anche *Arist. Po.* 1342a20 e *E.N.* 1128a5.

91 Lanza 1990, 218, n. 1.

92 'Ci si può chiedere se sia superiore l'imitazione epica o quella tragica. Se è superiore quella meno *volgare* e tale è sempre quella che si rivolge a spettatori superiori, è ben chiaro che quella che imita tutto è *volgare*: come se non si capisse se non ciò che vien posto direttamente davanti, si agitano con molti movimenti, *come gli auleti scadenti che si attorcigliano se devono imitare un disco o tirano il corifeo quando suonano Scilla*' (trad. D. Lanza).

che accompagnava il canto sottolineava il ritmo con movenze corporee.⁹³ Verosimilmente il movimento mimico in questione simulava il roteare del disco lanciato e la *Scilla* era un ditirambo di Timoteo, anche se si trattava di un tema ricorrente di composizione. Il participio ἔλκοντες indica un modo di afferrare qualcosa violentemente (cfr. Arist. *EN* 1149b12), un'azione affatto agevole per l'auleta, che aveva entrambe le mani impegnate sullo strumento. Come conclude Lucas (1968, 252), è inutile stare a interrogarsi su come un uomo potesse fare movimenti di tal genere senza interrompere l'esecuzione; piuttosto, sembra che il caso descritto in Arist. *Po.* 1461b30-32 rappresenti un esempio estremo di quella che era una pratica comune. Ad ogni modo, quello che Aristotele, e prima di lui Platone, disprezzava erano le rappresentazioni solistiche in cui si faceva sfoggio di grandi virtuosismi diffusi con la rivoluzione della cosiddetta 'Nuova Musica' nel v secolo a.C.⁹⁴

I movimenti intenzionali—così come quelli involontari—eseguiti dagli auleti, quando regolari e moderati, erano accettati e talvolta persino lodati, quando eccessivi e innaturali, erano deprecati: è confermato il ruolo centrale giocato dalla relazione tra la percezione del suono dell'*aulos* e la visualizzazione del corpo dell'auleta. Relazione che a sua volta giace su quella ancora più stretta, 'strutturale', tra strumento e strumentista: come alcuni tratti della fisionomia dell'*aulos*, così anche alcuni atteggiamenti del corpo dell'auleta sono biasimevoli, quasi che le caratteristiche negative passino vicendevolmente da strumento a esecutore in una sorta di respirazione circolare.

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93 Cfr. anche Schol. Aeschin. *Tim* 10 e Dio. Chry. *Or.* 78.

94 Cfr. Pl. *R.* 397a.

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Choreography of *Lupercalia*

Corporeality in Roman Public Religion

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Abstract

In this paper, I apply the methodologies of dance studies and cultural studies of the body to an analysis of the Roman *Lupercalia*. Focusing on the corporeality of the participants as the most striking component of the performance, I demonstrate that the physicality of these bodies and their mobility through the city of Rome not only transmit but also generate cultural significance, which is crucial for understanding the role of dance in Roman public rituals and its consequent part in the construction of Roman identities.

Keywords

dance – Roman religion – choreography – *Salii* – *Lupercalia*

Introduction

In the final chapter of *De tranquillitate animi*, Seneca explains to Serenus the importance of amusement as refreshment for the spirit and, among various possibilities of leisure and entertainment, he praises dance as an activity that releases the daily tensions of mind. A man of his time, the philosopher knows well the Roman enthusiasm for pantomime, according to which “men and their wives compete with one another as to which moves the flanks more enticingly” (*mares inter se uxoresque contendunt uter det latus mollius*, Sen. Nat. 7.32.3).¹

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So, anticipating any possible query about the immorality of his bold advice, he introduces a short digression that clarifies the qualities of a ‘proper dance’:

et Scipio, triumphale illud ac militare corpus mouebat ad numeros, non molliter se infringens, ut nunc mos est etiam incesso ipso ultra muliebrem mollitiam fluentibus, sed ut antiqui illi uiri solebant inter lusum ac festa tempora uirilem in modum tripudiare, non facturi detrimentum, etiam si ab hostibus suis spectarentur. (Sen. *dial.* 9.17.5)²

And Scipio moved his triumphal and soldierly body to the beat [of music], not contorting softly as is now the fashion for those who even in walking sway with more than a woman’s softness, but dancing in the manly style in which those men of old used to dance during the times of games and festivals, risking no loss of dignity even if they were being watched by their own enemies.

The first and most immediate interpretation we draw from these words is the binary opposition between the ‘soft’ effeminate dancing style of Seneca’s days (*molliter/mollitiam*) and the virile manners of the men of old (*antiqui illi uiri/uirilem in modum*). Not by chance, Seneca chooses Scipio Africanus to epitomize this ideal form of dance and the bodies that perform it:³ the manly, soldierly, and triumphal bodies of the Roman *uiri*.⁴ Moreover, this dance is described as a communal performance—we know this from the contrast between the plurals *antiqui uiri* and *hostibus*—that must be displayed in the context of the Roman games (*inter lusum ac festa tempora . . . spectarentur*): a moment of ‘exulting’ acclaim of the *Romanitas*.⁵

I also thank the organizers and participants of the MOISA conference in Newcastle University and of *Epichoreia* in New York University for their valuable feedback.

- 1 On Imperial pantomime cf. Garelli-François 2007, Lada-Richards 2007, Hall and Wyles (eds.) 2007, and Webb 2008. For Seneca’s relationship with this theatrical form, cf. Zanobi 2014 and Slaney 2016, 1–32.
- 2 Unless otherwise stated, translations are my own. Edition by Reynolds 1977.
- 3 Considering the term *triumphale*, Cavalca Schioli (1981, 134), Costa (1994, 197), and Davie and Reinhardt (2007, 258) suggest that he could be Publius Cornelius Scipio Africanus, who defeated Hannibal in the Second Punic War. Cf. Polybius (21.13) and Livy (37.33.7).
- 4 On the characteristic ways of walking of the Roman *uir*, cf. Corbeill (2004, 118–122), Fowler (2007, 4–7), and O’Sullivan (2011, 17–20).
- 5 Aware of the modern misapplication of term *Romanitas* highlighted by Dench (2006, 31), as well as the multi-faceted nature of what can be intended by ‘Romanness’, I will be referring to it as a way to conceptualize the cultural identity of the Roman *uir*.

This plurality of bodies performing together might initially invite us to see a parallel with the Greek chorus.⁶ However, whereas the Greek concepts of *mousikē* and *choreia* are founded on the indissoluble blending of dance, music, and song,⁷ the Roman philosopher seems to concentrate on the most physical aspect of the performance, with an explicit focus on the movement of the body (*corpus mouebat*): he does refer to the rhythm of the music in relation to movement (*ad numeros*), but he insists on both the visual and the aural qualities of rhythm by means of the technical verb *tripudiare* ('to dance in triple time').⁸ At the same time, Seneca talks exclusively about manners and measures of the Roman *uiri* (*uirilem in modum*), thus eliminating from his idea of dance other categories of age and gender that are central to understanding the nature and meaning of Greek chorality.⁹

Theoretically, the practice described in Seneca's lines corresponds to the activity of the Salian *sodalitas*. Even if the singing of a *carmen* is omitted from his explanation, the mention of Scipio Africanus, the martial vocabulary of dancing, and the use of the verb *tripudiare*¹⁰ invite us to consider this archetypal dance, which is one of the best-known ceremonies of the Roman religion.¹¹ In this paper, however, I intend to show that the passage of Seneca might be referring to a generic way of understanding a branch of Roman religious dance. This generic style is characterized, above all, by a collective and manly way of moving, embedded in the ludic atmosphere of the festivals and, apparently, more spectacular than musical. A highly physical ritual behaviour, it demonstrates its connection with the public space and with the origins of the city by embodying the identity of the elite and re-articulating their own idea of *Romanitas* before the citizen body.

The lack of musical references in this and other descriptions of dance, together with the vagueness that characterizes the Latin vocabulary of body movement, has prompted scholars to univocally claim a poverty of

6 On Greek chorality and *mousikē*, cf. Murray and Wilson (eds.) 2004, and Athanassaki and Bowie (eds.) 2011.

7 Cf. Lonsdale 1993, Henrichs 1994-5, and Naerebout 1997.

8 For the Greek property of rhythm as "bodily movement through time", cf. Kowalzig 2013.

9 For the chorus and its connections with the collective nature of the community at large, cf. Kowalzig 2007 and Kurke 2012. For female choruses, cf. Calame 1977 and Peponi 2007.

10 On the Salian connections with *tripudio*, cf. Liv. 1.20.4, Hor. *Carm.* 4.1.28, Serv. A. 8.285, and Porph. Hor. *Carm.* 1.36.12.

11 On the *Salii*, cf. Wissowa 1902, Cirilli 1913, Lambrechts 1946, Bloch 1958, Dumézil 1966, Rüpke 1990, Bremmer 1993, Borgna 1993, Torelli 1990 and 1997, Habinek 2005, 8-33, Glinister 2011, and Granino Cecere 2014.

choreographic culture in ancient Rome.¹² This idea stems from a longstanding Western conception of dance as a derivative of music—a sub-product of harmony and rhythm that has to be performed and theorised according to fixed parameters,¹³ but also relates to Roman moralistic statements about their perception of Greek *choreia*.¹⁴

Yet, to fully appreciate the role of dance and its significance in Roman public religion,¹⁵ it will be necessary to consider alternative qualities that compensate for the lack of an explicit musicality. According to the latest critical approaches within dance studies, it is essential to acknowledge the weight of corporeality, motion, agency, and visibility as integral elements of choreographic practice,¹⁶ something which is already manifest in Seneca's words. In the case of ancient Rome, these aspects characterize, more than any other, the majority of religious dance practices. Although, strictly speaking, some of these rituals cannot be considered as dance, the analysis of these practices through a choreographic lens will help elucidate pivotal questions about the Roman dance landscape on a more general level and its alignment with broader issues of religion, culture, and society. For this reason, I intend to re-examine the traditional concept of choreography as has been recently proposed by dance scholars, and to apply it to the study of the *Lupercalia*.¹⁷ Even if this practice has never been seen as choreographic, I argue that the ludic physicality of the *Luperci* can be of use in capturing the essence of those virile bodies that Seneca invited to move.

1 Salian Vocabularies

Although we know little about the Salian performance and its ritual functions, scholars tend to agree on the political significance of these ceremonies in the late republican and early imperial periods in terms of communicating ideas of sovereignty, foundation, and peace.¹⁸ The gods of the archaic State were invoked in the *Carmen Saliare*, while the sacred shields of Numa (*ancilia*)

12 Naerebout (2009) offers an extremely useful overview of these negative assumptions.

13 For an outline of the Western concept of choreography and its relation to music, cf. Foster 2010, 35-42. For traditional definitions of dance, see also Giersdorf 2013, 8-12.

14 Cf. above all the testimonies of Cornelius Nepos (*praef.* 1.1-3 and *Epam.* 1.2) revised by Curtis 2013.

15 On male dance in the private sphere, cf. Corbeill (1996, 135-39).

16 On these approaches, cf. Desmond (ed.) 1997, Carter and O'Shea (eds.) 2010, Dills and Cooper-Albright (eds.) 2013.

17 Cf. Lepecki 2007, Foster 2009 and 2010, Giersdorf 2013, and Kwan 2013, 4-5.

18 The most complete overview of these questions can be found in Glinister 2011, with bibliography.

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Book Reviews



Kowalzig, B. and Wilson, P. (eds.)

Dithyramb in context, Oxford, Oxford University Press, 2013, xvii, 488 pp.

Pr. £120 (hb). ISBN 9780199574681.

This important book assembles nineteen distinguished scholars from diverse disciplines to tackle an elusive, Protean genre (twenty, if we count the chapterless editor, as we should, since helpful editorial intervention is omnipresent, especially cross-referencing). Its cutting-edge contributions impressively succeed, even if, inevitably, some items appear repeatedly, while interpretations display contributors not singing from one dithyramb sheet. One of numerous strengths is that many different styles of scholarship are applied.

After a substantial orientatory introduction Barbara Kowalzig argues (c. 2, ‘Dancing Dolphins on the Wine-Dark Sea’), that archaic dithyramb relates significantly to the period’s trading explosion and socio-political changes. Much here hangs on Arion, whose primarily citharoedic role is side-stepped. And was Lasos’ Hermione an important trading city? Experiencing political changes in his time? *Katagorgia*-like festivals support Dionysus’ seafaring link, but his sailing on pots—like dolphins hoplite-ridden, metamorphosing into humans, or paralleling processing men (really a dithyrambic *choros*?)—admits various interpretations. Kowalzig follows Csapo: I (and Heinimann, c.14) am more Lissarraguesque: painters are juggling ideas, not theorising links between Athens’ dithyrambic *choroi* and Cleisthenic policies. Finally 54–8, on dithyramb’s ‘commodification’, may exaggerate their ‘globalisation’ and underestimate other genres’ Panhellenic profile (rhapsodes? citharodes?).

In c. 3, ‘Dithyramb and Dionysian Initiation’, Salvatore Lavecchia presents dithyramb as vehicles whereby Dionysus transforms mortals by death and rebirth (‘dithyramb...*performs* the concept of change’) symbolised by Arion’s sea-leap and dolphin-salvation. Bold claims, but Lavecchia adduces Dionysiac diving at Lerna (‘possibly’ in Pindar fr. 70a) and Hermione, and Dionysiac elements in Pindar’s dithyrambic proems and Heracles-Cerberus narrative. Their absence from Bacchylides and later dithyramb falsifies

statements that they figure ‘throughout its history’. But for Lavecchia ‘Pindar’s *Herakles–Kerberos* would . . . transpose the essence of Dionysus into poetic and mythological imagery’; for his Pindar ‘A dithyrambic song . . . can . . . emanate only from . . . Dionysos Lysios, since only Lysios is capable of engendering a dithyramb which is in a state of ‘excitement’, *κεκίνημένος*’.

In c. 4, ‘Lasos of Hermione and Demeter Chthonia’, Lucia Prauscello, demonstrating the closeness at Hermione (as elsewhere in the Argolid and Corinthia) of the cults of Dionysus and Demeter Chthonia, scrutinises Pausanias and Aelian on the *Chthonia*, concluding that the elegiac 8-liner (*SH* 206) Aelian cites from ‘Aristocles’ (not their poet but a scholar?) attests earlier ritual in which one violent bull, not Pausanias’ four cows, meekly accepted sacrifice by an old woman. Finally Dionysiac (?Dryopic) bulls at Hermione chime with Lasos’ transfusion of dithyrambic metre and Aeolic mode (hardly, however, diction!) into his *Hymn to Demeter*.

In c. 5, ‘Dithyramb and Greek Tragedy’, Luigi Battezzato, noting *διθύραμβος*’ mere two appearances in tragedians, examines tragedy’s interaction with dithyramb, attractively suggesting Ion of Chios *PMG* 740, responding to or stimulating Sophocles’ *Antigone*, presented Antigone’s and Ismene’s burning in Plataea’s *Heraion* as an (anti-Theban) *aition* for its *Daedala*; that *P.Vindob.* 19996a cites Melanippides’ *Persephone*, marked by *ἐξέγειρε δὲ Λακεδαιμονίων πόδα* as for Spartan performance; finally that *Helen* 1353–68 present a mythical Helen dancing aetiologically for Demeter and Dionysus, just as Athenians might know Dionysiades and Leucippides ran and danced for Dionysus in contemporary Sparta, cf. *Lys.* 1305–15.

In c. 6, ‘The Name of the Dithyramb. Diachronic and Diatopic Variations’, Giambattista d’Alessio navigates circumspectly through the untidy nomenclature and performance-modes of *kuklioi choroï*, *nomes* (sometimes choral) and dithyrambs (sometimes solo); argues that scholarly classification of poems like Bacchylides’ as dithyrambs because predominantly narrative goes back to Glaucus of Rhegium, albeit audiences perhaps perceived them differently; and that Bacchylides 20 (*Idas*) and 61 (*Leucippides*) are ‘dithyrambs’ sung by marriageable Spartan *παρθέναι* for Dionysus Colonatas, as perhaps Pratinas’ *Caryatides* for Dymaenae (‘dancing Bacchae’ in Hesychius). Finally Sparta’s censure of Timotheus’ *Birthpangs of Semele* at its *Eleusinia*, for wrongly teaching *νέοι*, shows it was a dithyramb sung by youths.

In c. 7, ‘Dithyramb and the Athenian Empire’, David Fearn explores ways circular choruses (as early fifth-century Athenians, he insists, saw poems Alexandrians termed ‘dithyrambs’) might communicate Athens’ imperial ideas. He revisits Bacchylides 17, with elements both Apolline and Dionysiac, in which Ceians sing an Athenian, not Ceian version of the Minos myth, a

thalassocracy divinely vouchsafed to Theseus—perhaps, Fearn suggests, a soft, Cimonian management of the Delian League, echoed in 422 in fr. 329 of Eupolis' *Cities* (Athenian *logistai* judging allies' *choroi*). Among interesting suggestions is that Bacchylides 17 might have been reperformed at Athens, perhaps at the (Apolline) *Thargelia*.

In c. 8, 'Circular Choruses: Problems of Definition', Paola Ceccarelli demonstrates that in inscriptions 'διθύραμβος' only once (Cyrene) refers to choral performances: at Athens χορὸς ἀνδρῶν / παίδων is the norm; 'κύκλιοι χοροί' appear only elsewhere, always (except perhaps at Didyma) relating to Dionysia. Διθύραμβος denotes solo, usually citharoedic, performances. In literary texts (except Σ Aeschines Tim. 10) 'κύκλιοι χοροί' connote dancing not for Dionysus but another god. Adducing aulos-accompanied χοροί performing compositions for kithara-accompanied solo singing, and vice versa, Ceccarelli suggests 'in the Hellenistic period, the average theatregoer might have talked of cyclic performances for choral dances, and of dithyrambos for specific bravura solo pieces. . . . The content will have been narrative'.

In c. 9, 'The semantics of processional dithyramb. Pindar's *Second Dithyramb* and Archaic Athenian Vase-Painting', Guy Hedreen, seeing pre-Lasos dithyrambos as processional, argues few archaic vases use their shapes to represent circular movement—commendably rigorous, but laxer in seeing some images as representing Dionysiac ritual and men becoming dolphins as models for dithyrambic performers, associable, like Exekias' Dionysus, with the ship-cart processions escorting him into Ionian cities, and reflected in *Bacchae's parodos*, Theseus' heading the δις ἑπτά and Dionysus' Olympic *adventus* (fr. 70b). He suggests 'Early dithyramb may have employed a processional form as well as animal imagery or costuming to convey the same irresistible, overpowering, transformative experience of Dionysos'.

Some of Armand D'Angour's c. 10, 'Music and movement in the Dithyramb', is reperformance. Of three hypotheses his second—by ca. 500 greater sobriety of movement accompanied the increasing exuberance of dithyrambic words and melody—convinces. But did Pindar's second dithyramb have fifty dancers? Can triadic forms be *both* suitable for containing unruly Dionysiac energies *and* regular for *epinicia*? His third, that early dithyrambos' melodisation followed traditional rules ('melodic contours inherent in Greek speech'), also persuades. But the first, that Archilochus fr. 120 is self-referential and *from* a dithyramb, is improbable: *Bacchae* 604-41's trochaic tetrameters hardly show they are a 'specifically Dionysiac metre'.

In c. 11, 'Songbenders of Circular Choruses', John Curtis Franklin convincingly suggests that already by Arion *citharoedia* and choral dithyramb converged (*viz.* *citharoedi* led choruses), and features later branded καμπή were

there when the auletes Clonas and/or Sacadas developed the *trimeres/trimeles nomos*. Lasos carried further already advanced polytonic modulations, making *auloi*, not *citharae*, favoured accompaniments to dithyrambs since they had the volume needed for fifty-strong, now circular Attic *choroi*. Much early fifth-century polytonic music was composed for both *auloi* and strings, although sympotic aristocrats perhaps preferred traditional heptatonics. 'New' musicians in *many* genres went further, but dithyrambic poets attracted most flak because huge choruses had a wider impact.

In a characteristically fun chapter (12), 'Kyklops *Kitharoidos*. Dithyramb and Nomos in Play', Timothy Power argues that Philoxenus' *Cyclops* offered serious *and* comic reactions to Timotheus' homonymous nome, exploiting both mimesis ('Polyphemus portrayed by a solo singer-actor, *pretending* to play the kithara he holds') and 'polyphonic interaction between solo actor-singer and chorus'. He diagnoses criticism of contemporary *kitharoidia* already in Melanippides' *Marsyas* and theatricality in fragments of Timotheus' nomes and dithyrambs, though insisting '*kitharoidia* did not anticipate dithyramb in musical experimentation' and stressing Timotheus' own claimed *eunomia* (*Persae* 240) and his *Cyclops*' seriousness. Much persuades, though Stratonikus' quip about Timotheus' *Artemis* ('May you have such a daughter!' *PMG* 778) is surely aesthetic not moral.

In another provocative chapter (13), 'Satyr-Play, Dithyramb, and the Geopolitics of Dionysian Style in Fifth-Century Athens', Mark Griffith argues dramatic satyrs, enabled partly by their fluid identity, served 'as a locus (focus) for musical critique and of . . . metaperformative commentary on the aesthetic, physical, and ethical (or socio-political) aspects of male *paideia*'. Pre-440 satyr-play, with satyrs recurrently excited about novelty and lively commentators on instruments, song and dance, is more musically adventurous than pre-440 dithyramb. That satyr *choroi* were 'good to dance with, and good to sing with' is convincing; less so that their rusticity helped audiences' rural demesmen integrate into the Cleisthenic *polis* (whereas integration through participation in dithyrambic *choroi* seems indubitable).

Alexander Heinimann's c. 14, 'Performance and the Drinking Vessel. Looking for an Imagery of Dithyramb in the Time of the 'New Music', rightly questions identifying vase-paintings as 'illustrations' of drama or other choral activity: rather sympotic vessels' images are 'not so much what the . . . viewer experienced outside the . . . feast but what he liked to think with' at symposia. Thus two Eretria-painter cups 'present an intermingling of sympotic and choreutic elements that goes well beyond the generic dance imagery essential to the Dionysiac chorus'. Similarly vases whose tripods and bull sacrifices apparently

evoke dithyrambic victories offer nothing specific about the festival but simply 'an imagery of festivity'. For Heinimann Oltos' psykter 'negotiates the idea of the dolphin choros into the symposium: gathered around the mixing bowl and its wine-cooler the drinking-party—symposiasts, warriors, *choreutai*—is confronted with a utopian display, where all these social roles blend into each other'.

In c. 15, 'The Poetics of Dithyramb', Andrew Ford argues compound epithets, albeit marking high lyric style overall, were, as ancients claimed, especially characteristic of *dithyramb* (a compound-word!) because the recurrently epiphanic, renovatory Dionysus required multiple, 'new' *epicleseis*—a generic feature 'new music' poets pushed further while also pursuing sonority. Ford persuades (though poets give many gods multiple *epicleseis*). Persuasive too his case for late classical dithyramb's deployment of 'wise epithets', some evoking earlier poetry, others contemporary science, though among cases discussed neither Licymnius 769 (*Hygieia*-hymn) nor Timotheus' *Persae* is a dithyramb.

In c. 16, 'Genre Rules and Cultic Contexts', Claude Calame sets surviving scraps of Pindar's *Dithyrambs*, heavily self-referential (especially their openings) to poetics and Dionysiac cultic contexts, with some Dionysiac links in narratives, against Bacchylides' poems classified by Alexandrians as *Dithyrambs*—overwhelmingly narrative (or dramatic exchange, 18), never to do with Dionysus, and only a few lines evoking cultic contexts (in 17 Apolline!). After illuminatingly analysing them, and stressing 17's paeanic features, Calame suggests narrative 'required' dithyramb, whereas requests for epiphany (absent from dithyramb) and insistence on ritual required paeon.

In c. 17, 'Dithyramb in Greek thought', Anastasia-Erasmia Peponi explores the fall-out from Plato's diagnosis at *Republic* 394b-c of dithyramb exemplifying poetry that uses not *μίμησις* but the *ἀπαγγελία* of the poet himself, noting crucially that *ἀπαγγελία* is a marked term, meaning 'oral delivery of a narrative in performance'; hence *ἀπαγγελία* is a 'vehicle through and by which *mimesis* as impersonation could also occur'. One outcome highlighted is that dithyramb's chorality is 'underestimated, neglected or even suppressed in surviving Greek literary thought', unlike *HHymn Ap.* 158-64's focus on chorality.

In c. 18, 'One who is fought over by all the Tribes', Giorgio Ieranò examines Athens' commissioning and rewarding of dithyrambic poets, their eulogies of Athens in *prooemia* and often theme, and their reassuring messages for the city, so un-tragic. Contrasting the rewards and non-comic contemporaries' praise with Comedy's criticism and parody, he convincingly argues that comic flak attracted by Cinesias and Philoxenus attests popularity not contempt: once dead, Philoxenus too acquired classic status, just as *Clouds*' 'Better Argument' admired earlier fifth-century poets.

In c. 19, 'Choruses and Tripods. The Politics of the Choregia in Roman Athens', Julia Shear, moving from the statue-base honouring Philopappus for financing all *phylae's choroi* as *agonothetes*, contrasts the many traditional tripod-bases, commemorating *choregos*, *phyle*, and sometimes *auletes*, which resume classical practice and by usually triangular form, location, formulae and sometimes lettering emphasise the continuity (diluted by second-century moves to verse) of the *Dionysia's* dithyrambic competitions (between phyletic, albeit smaller, *choroi*) with classical antecedents. Rightly stressing Athenian features (e.g. demotics), she overplays their inflexibility in 'negotiating' Athens' relations to Rome: *cives*, after all, get *praenomina* and *gentilicia*—they *could* have been reduced to *cognomen*/ὄνομα alone (like sophists in Philostratus VS).

In c. 20, '*Dithyrambos, Thriambos, Triumphus*. Dionysiac Discourse at Rome', Ian Rutherford discusses Sarapion's (surely *cyclic*) choral victory; Aristides' mini-*agon* for ten *choroi* at Pergamum; and some writers' interpretations of dithyramb (including Plutarch's *Banquet* and *On the E*). His last pages discuss Dionysus' *thriambos* both Indian—and its imitation by Alexander—and on sarcophagi; whether Horace, *Odes* 4.2, 1.37, *Epode* 9 or Tibullus 1.7 are 'dithyrambs'; and whether tripods in Philadelphus' procession make it a 'triumphant dithyramb'. Surprisingly Dionysus' Indian triumph in Dionysius' *Periegesis* 1153-65 escapes this instructive *periegesis*.

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Ancient Greek Writers on their Musical Past. Studies in Greek Musical Historiography, (Syncrisis: Biblioteca di studi e ricerche sull'antichità classica), Pisa; Roma: Fabrizio Serra editore, 2014, 120 pp. for Greek and Roman Musical Studies.

This slim but extraordinarily rich book, whose six chapters originated as lectures delivered at the University of Calabria in 2013, is, like everything Andrew Barker has published on the subject, an indispensable contribution to our understanding of ancient Greek music. It addresses the musical history of early Greece, not by way of reconstruction, but assessment of the literary sources that relate it.

Barker focuses primarily on “musical historians,” that is, scholars and historians who wrote prose narratives “overtly presented” as contributions to musical history (15), and thus quite unlike the incidental or ornamental remarks on music we tend to encounter in other authors. He sets out to understand how these writers “went about their business” (106)—their methodologies, points of emphasis, and the nature of the works in which they presented their narratives. Secondarily, he seeks to uncover the agendas and prejudices informing their viewpoints.

Both goals are frustrated by the late texts that fragmentarily preserve and often confusingly represent the musical historians. In the first four chapters, Barker takes on perhaps the most frustrating, if also the most valuable of those texts, the pseudo-Plutarchan *De musica*. In the first chapter, he shows that the farraginous character of the treatise as whole is well exemplified in the speech of Lysias in chapters 3-12, which is presented as a unified musical history, but is very much a jumble. Barker’s chapter-by-chapter analysis highlights the peculiarities of this history—it privileges agonistic solo music over choral and smaller-scale lyric forms—and its inconsistencies, which result from the merging of two fundamentally different sources, one prioritizing *kitharôidia* in time and importance, the other, auletic music.

Barker’s comments on the important yet potentially misleading testimony for the archaic *nomos* in *De mus.* 3-8 are particularly incisive. I was somewhat perplexed, however, by his implication that my own reading of it repeats as “historical fact” the mistaken notion that *nomoi* “provided the musical foundations of all or at any rate the great majority of archaic compositions” (19). I do not say this in the pages cited from my *Culture of Kitharôidia* (227-29), nor anywhere else. Rather, I treat the *nomos* as a *performance* genre confined to the practice of agonistic musicians, and I believe I offer a critically nuanced reading of the *De musica* that supports my observations. My comparison of agonistic *nomos* with *rāga* does not mean I think the former is a proto-*harmonia*,

but that both forms provide traditional frameworks for “composition-in-performance” (cf. West’s *Ancient Greek Music*, pp. 216-17). Barker generally avoids detailed engagement with contemporary scholarship—a great virtue of this book—but in this case his critique is perhaps too reductive.

In his second and third chapters, Barker discusses, and brings alive, the two main sources behind Lysias’ speech, Heraclides of Pontus and Glaucus of Rhegium. These scholars “adopt diametrically opposite positions” on historiographical methods—Heraclides prefers to use literary sources, Glaucus applies empirical musical evidence—and have differing views on the “origins and central features” of archaic music that reflect radically divergent intellectual and cultural orientations (33-35). Heraclides’ conservative Platonism shows in his privileging of string-accompanied song and the “nativist” Hellenic bias in his account of musical origins. Barker suggests that Glaucus’ prioritizing of auletic music by contrast represents a progressive stance, an attempt to “defend music for the aulos, and the innovative practices of contemporary musicians, against the attacks of their critics” (45). This suggestion is persuasive, and it occurred to me that the prominent role assigned to non-Greek musicians (Olympus, Orpheus) in Glaucus’ history might echo too the interest of New Music poet-composers in “exotic” figures, modes, and instruments (e.g. Telestes *PMG* 806, 810).

While I hesitate to strike another discordant note, I must respectfully disagree with Barker’s claim that my own discussion of Glaucus (*Culture of Kitharôidia*, 238-40) frames his pro-*aulos* agenda as “strange and unorthodox” (44). That overstates the case: I label it a “seemingly minority view,” and I call his “aulodization” of the normally *kithara*-identified Stesichorus “curious.” Both characterizations can probably stand, but Barker’s perspicacious comments in these chapters and elsewhere (cf. p. 70 on Aristoxenus’ valorization of early *aulos* music) should make us wary of assuming that lyre-centric histories are guileless and normative while auletic ones are somehow deviant. After all, already the *Homeric Hymn to Hermes* could imagine a purely *aulos*-based musical past (452), though probably not without some humor.

The bulk of Chapter 3 is devoted to two other historians who leave traces in the *De musica*, Hellanicus and Ephorus. Barker’s discussion of the former includes appealing arguments for an early dating (later 6th century) of the Sicyonian inscription, which he thinks was a source for Hellanicus (rather than the other way round). Barker also proposes that Ephorus’ account of the imbrication of musical culture and political organization on early Crete directly influenced Plato’s musico-political vision in the *Laws*.

Chapter 4 turns to Aristoxenus, who probably did not write a work dedicated to musical history, but touched on a range of music-historical topics in

works such as *On Music* and *Historical Notes*, both of which likely dealt with musical “first discoverers,” and his account of the “opinions of the *harmonikoi*.” Much of the chapter is devoted to a painstaking examination of a textually problematic passage from *De mus.* 16 on the origin of the Mixolydian mode, which Barker shows was informed by one or more of these treatises. There is also a detailed discussion of *De mus.* 11, which cites Aristoxenus reporting the views of *mousikoi* on Olympus’ invention of the enharmonic genus. The passage implies, among other things, that Aristoxenus conferred with practicing musicians in formulating his own views of early musical history (67).

Chapter 5 considers musical historians of the Hellenistic period, when the practices and institutions of archaic and classical *mousikê* were increasingly understood to belong to a “bygone world” (76). For these historians, as for us, the musical past was largely accessible only through often-obscure literary references. Interpretive confusion was common, as evidenced by the thicket of divergent scholarly views compiled by Athenaeus on the identity of the *magadis* (634c-637a).

In Chapter 6, Barker examines the evidential problems involved in comic dramatists’ references to musical culture, especially the New Music. His illustration of the issues serves both as a welcome introduction to comedy’s representationally complex engagement with music, and as a salutary warning to more experienced researchers to exercise appropriate caution when dealing with comedy. I particularly appreciated Barker’s remarks on the oft-cited fragment from Antiphanes’ *Third Actor*, in which a character heaps praise on the once-controversial Philoxenus while denigrating the dreck composed “nowadays” (207 K.-A.). While I might not go so far as to say “it’s very likely that the character was represented as an idiot whose opinions were entirely ridiculous” (92-93)—this seems in its own way too presumptuous—Barker rightly reminds us that we should not assume this character expresses the opinions of either Antiphanes or the Athenian majority in the 370s, when the play was probably produced.

In his “Conclusions,” Barker calls for a more systematic study of the tendencies and biases characteristic of different literary forms in their treatment of musical matters. This book offers masterful examples of how such a study might proceed.

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Scoditti, F.

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Greek influence was present in Roman music from its beginnings. In archaic times it found its way over hellenized Etruria, and after the end of the second Punic war (241 BC) Greek music came from *Magna Graecia* to Rome: in 240 BC Livius Andronicus from Tarentum was the first to perform a Greek tragedy and comedy in Latin on the Roman stage. After the incorporation of Greece as *provincia Achaia* in 146 BC there was no frontier left for Greek music, and after the battle of Actium (31 BC) and the incorporation of Ptolemaic Egypt as a Roman province (30 BC) Rome adopted Alexandria as the cultural centre of the Mediterranean.

Greek musical theory was introduced to Rome in Latin by Varro of Reate (116-27 BC), who in the 7th book (*De musica*) of his *Disciplinae* presented an account of Greek thinking about music on the basis of the Aristoxenian school. This book is lost, but was liberally used by later Latin writers on music. With Varro's *De musica*, written in around 33 BC, the development of a Latin musical terminology begins, and this is the subject of Scoditti's glossary.

In the preface (9-12) Aldo Luisi gives a survey of music in Rome, highlighting the rich iconographical and archaeological material, which is enriched by texts in poetry and prose and by Latin treatises on music. On the other hand, there are no testimonies of Roman music accompanied by Greek notation.¹ The fact that amongst the 63 fragments of ancient Greek music 40 belong to Imperial times² is evidence for the impact of Greek music on the Romans.

In his introduction (13-19) Francesco Scoditti begins with a musical scene in Apuleius (*Met.* 10.30-32). In the sentence *haec puella varios modulos Iastia concinente tibia procedens* ... we find Greek *termini technici* (t.t.) in transliterations (*Iastia*) side by side with translations (*concinente*) and indigenous Latin words (*modulos, tibia*). Latin transliterations of Greek t.t. appear also in Varro.³ By the time of Vitruvius, whose excursus on music in *De architectura* appeared ten years later, we know that for many Greek musical t.t. there were still no

1 Luisi (9) believes in a "frammento in notazione greca del verso 861 dell' Hecyra di Terenzio". As Bruno Stäblein has seen, the respective signs are neums inserted later, as we find them in many manuscripts of Vergil and Horace; see Wille 1967, 227f., 253-260. For details, see Pöhlmann 1970, 43f.

2 See Pöhlmann and West 2001 and West 2007.

3 Scoditti 14: *tropus, hypodorius, hyperlydius*: Don. *Gramm.* 4.532.20f.; *tetrachordum*: Varro *L. mense*: Varro *Men.* etc.

Latin equivalents.⁴ According to Scoditti's *Glossarium*, it appears that musical *termini* in Varro are attested as a rule for Varro's *De lingua latina*, *De re rustica* and his *Saturae menippeae*, but only exceptionally, by comparison with the excursus of Vitruvius, for the lost fifth book of Varro's *Disciplinae*.⁵

Altogether the musical vocabulary of Varro, as far as it is attested, contains indigenous Latin words,⁶ and words that may be of Etruscan origin,⁷ side by side with transliterations of Greek t.t.⁸ and translations.⁹ The long fragment Varro 282 Funaioli (*incertae sedis*, not in Scoditti) might afford more entries. But the importance of Varro for the development of a Latin musical terminology is evident already from the aforesaid examples. Thus the *Dialectica* of Martianus Capella (4.335) is well entitled to say: *Marci Terentii prima me in Latinam vocem pellexit industria ac fandi possibilitatem per scholas Ausoniae comparavit*.¹⁰

Of course there were earlier attempts to cleanse the Latin musical vocabulary of Greek elements. Already Cicero had tried to avoid transliterations of Greek t.t. in favour of translations or indigenous Latin words.¹¹ The only transliteration amongst the entries from Cicero in the glossary is *hydraulus* (*Tusc.* 3.43). Translating Plato's *Timaeus* Cicero uses Latin equivalents for the transliterations *diplasius*, *hemiolius*, *epitritus* and *epogdous*, namely *duplus*, *sesquialterus*, *sesquitertius* and *sesquioctavus* (*Tim.* 7).¹² Quintilian (9.4.50) translates the rhythmical *metabole* by *transitus*. The development of Latin equivalents for transliterations of Greek t.t. went on in the centuries between Imperial times and late antiquity, as many new translations of Greek t.t. appear in the treatises of Martianus Capella and Boethius. A turning point seems to have been a lost treatise of Ceionius Rufius Albinus, consul and then praetor in 335 AD, according to Boethius (*Inst.* 1.26, p. 218): *Albinus autem earum (chordarum)*

4 5.4.1: *nonnulla eorum latinas non habent appellationes*.

5 Scoditti s.v.: *chromaticum genus, chroma; diatonicum genus, diatonum; enarmonium genus, enarmonios, harmonia*: Vitruvius 5.4.3-6. For a reconstruction of Varro's 7th book of the *Disciplinae* see Wille 1967, 413-420.

6 E.g. *canere, cantare, carmen, fides, inflare, nenia*.

7 E.g. *subulo, tibia, tuba*.

8 E.g. *chorda, citharoedus, hypodorius, hyperlydius, lyra, mese, melodia, metrum, organum, prosodia* (Varro fr. 282 Funaioli), *psalterium, pythaules, rhythmus, tropus, tetrachordum, tympanon*.

9 E.g. *accentus* (Varro fr. 281 Funaioli), *accinere, citharicen, incentiva, incinere, liticen, media, succinere, tonare*.

10 Aptly quoted by Scoditti (14).

11 See Scoditti 16f. on *De natura deorum* 2.146; 18 on *De republica* 2.69.

12 Scoditti s.v. *ratio*.

nomina latina oratione ita interpretatus est ut hypata principales vocaret, mesas medias, synemmenas coniunctas, diezeugmenas disiunctas, hyperboleas excellentes (Scoditti 15f.).

As the Latin technical vocabulary of Greek music was not able to express the sensations roused by music, it was enriched by adopting words from the current language (Scoditti 16-18). Again early examples are furnished by Cicero (N.D. 2.146): *quo iudicatur in vocis et in tiliarum nervorumque cantibus varietas sonorum, intervalla, distinctio et vocis genera permulta, canorum fuscum, leve asperum, grave acutum, flexibile durum, quae hominum auribus solum iudicantur*.

It is Scoditti's aim (18f.) to compile a complete glossary of the musical Latin terminology, for musical instruments (accompanied by illustrations), musical practice, and musical theory, using quotations from Latin poetic and prose texts, before all the manuals of musical theory (see the *addendum* in n. 29).

The entries in the glossary itself (21-187) begin with transliterations or translations citing the corresponding Greek t.t. (missing in the case of *accentus* = *prosodia*). After that come quotations which provide a definition of the t.t. if available. There follow quotations for cases of special usage of the respective t.t., and if necessary the t.t. is explained in its wider context. Cross-references to other entries complete the picture. Depending on the available material, some entries are quite extensive. Thus, the glossary sometimes assumes the shape of a dictionary of Latin music. There are appendices presenting the Latin *termini* of late antiquity for the tonal system (189-191) and a bibliography (193-202).

Scoditti's wish is to provide the researcher in musicology and the student of Latin philology a useful tool for easy consultation of Latin musical terminology and the respective sources. We may welcome this enterprise, especially as it is the first of its kind.

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